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L'Arte Armonica,
or, *Logo Logico.*

A Treatise on the Composition of

MUSICK,

In Three Books;

With an Introduction on the *HISTORIES*, and
PROGRESS of *MUSICK* from its beginning to this Time.

Written in Italian by

GIORGIO ANTONIOTTO,

A. N. D.

Translated into English?

Vol. I

London; Printed by John Johnson in Cheapside.
1760.



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E R R A T A.

PA G. 12, at the begining of line 3, for *Melody* read *Harmony*.

Pag. 14, line 10, for *Lais* read *Laxis*.

Pag. 32, Example vii. for *Plate* 8, read 9.

Pag. 40, line 7, of Article v. for *as* the false fifth, read *has* the false fifth.

Pag. 48, for Article iv. read iii.

Pag. 72, line 5, add, after descending continually, *by fifths*.

Pag. 82, Article v. for *same* read *some*.

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E R R A T A.

In the CONTENTS.

Line 13. for *Aukatic*, read *Autentic*.
Chap. IV. Line 1. for *General*, read *Consonant Division*.
Chap. VI. Line 6. for *Page 41*, read *Page 40*.
— — — Line 7. for *ibid.* read 41.

In BOOK II. Part I.

Art. V. Line 11. for *Propositions*, read *Postpositions*.

In BOOK II. Part II.

Chap. V. Line 4. for *Page 73*, read *Page 72*.

In BOOK III.

Chap. I. Line 1. for *Page 78*, read 77.
— — — Line 7. for *Page 36*, read 86.

In the INTRODUCTION.

Page 14. Line 10. for *Lais*, read *Laxis*.

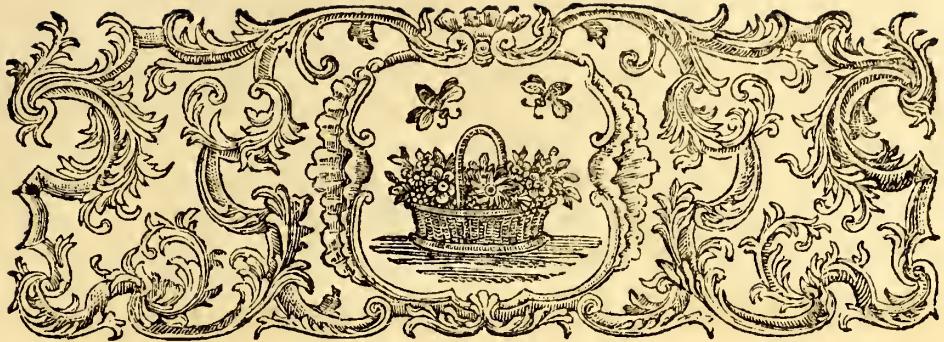
In BOOK I. Chap. V.

Page 32. Line 26. for *Plate 8*, read *Plate 9*.

In BOOK I. Chap. VI.

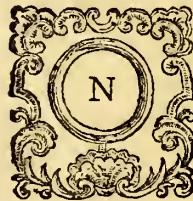
Page 34. Line 11. for *Noise*, read *Note*.
Page 37. Line 20, read *and the Indicative descending Seven serves only*, &c.
Page 39. Line 6. in the N. B. read, *and it's transposed Scales*.
Page 40. Line 13. for *as*, read *has the false Fifth A Flat*.
Page 42. Line 6. from the Bottom, for *Seven*, read *Five more of different*, &c.
— — — Line 2. from the Bottom, for *eighty*, read *eighteen Scales*.
Page 47. Line 13. for *F to B*, read *B to F*.
Page 48. Line 1. for *Consonant*, read *Compound Combination*.
Page 53. Line 7. from the Bottom, read *First and Second Chorus*.
Page 57. Line 12. for *two*, read *true fundamental Basse subfjt*.
Page 72. Line 5, read *descending continually by Fifths is contrary*, &c.
Page 78. Line 24. omit *Canon*, and read *Combination has no more*.
Page 82. Art. V. read *Of some equivocal Combination*.
Page 100. Line 36. for *compacted*, read *divided in two Notes*.





DELL'
ARTE ARMONICA.
THE
INTRODUCTION;
CONTAINING

An HISTORY of the PROGRESS of MUSIC to this Time.



A T U R E hath provided all Animals with certain Instincts, necessary both for their general and particular Preservation. Brutes are limited to simple Instincts, by which they are wholly guided and directed. But Man is distinguished by the Gift of Reason, by which he is able to controul, regulate, and use his several Instincts and Propensions, according to his Will and Pleasure. Moreover, there are implanted in him the Seeds (as it were) of several useful and pleasant Arts, with the Power of cultivating and bringing them to Perfection.

One of these Seeds, and not the least conspicuous, is undoubtedly the Faculty of Singing, of which Music may be considered as an Improvement; whose Busines it is to chear the Mind, and to relieve it, not only from the Irksomeness of Idleness, the Gloom of Care, and the Fatigue of domestic Employments; but likewise from the Power and Tyranny of our boisterous Passions, and many other Evils, which do but too often invade both the Mind and the Body, as the History of Mankind most plainly shews.

Thus we may, upon the best Ground in the World, assert, that Singing and Music are born with Man, are congenial, and even interwoven into his Frame and Constitution.

But then, as every one was endowed with a Propensity and Genius peculiar to himself, and modell'd, as it were, according to the Singularity of his own Constitution, there would arise in the World an almost infinite Variety of Tastes and Opinions, agreeable to the different Genius and Temper of different Persons and different Nations; and Singing and Music being differently pursued and cultivated, would at length be accommodated to the Taste of every particular Country, and to the Turn of its Inhabitants.

Thus the Music of the *Turks*, is entirely different from ours. The People of *Fez*, *Morocco*, and other Parts of *Africa*, have again a different Kind, which to us, who are not accustomed to it, appears to be very rough and horrid; but it nevertheless is highly pleasing and entertaining to them.

THE INTRODUCTION.

Thus, among the several Nations of *Europe*, there are found different Manners of Singing. The French, Polanders, Sicilians, Scotch, and other People, have every one a certain Mode peculiar to their Idioms, and the Taste of their Country; which must certainly proceed from their different Tempers and Constitutions, owing perhaps in a great Measure to the different Climates in which they live. There is also a great Variety of Tastes and Opinions among the Inhabitants of the same Country.

One Man is better pleased with the brisk and lively, whilst another is more delighted with the grave and pathetic.

Music, like all other Arts, is subject to the various Vicissitudes of beginning, improving, arriving at, what we may call, its perfect State, and afterwards decaying.

But of the different Epochas of the Improvements of Music, and the various Gradations by which that delightful Art hath arrived to its present State, we have in Truth but a very scanty and imperfect Knowledge.

Sacred History informs us, that *Tubal*, the sixth Descendant from *Adam*, was the Inventor of Wind Instruments, from whence we may justly infer, that these being contrived to imitate the human Voice, Singing must before have arrived at some Degree of Perfection.

From the same History we learn, that in *Judea*, in the Time of King *David*, a great Number of Singers and Performers upon Harps, and other Instruments, were employed in the Service of God; that therein were introduced both Psalms and Hymns; *David*, the King, himself assisting in those Performances.

In Imitation of this, and indeed as a Proof of it, these very Psalms are used to this Day in the Offices of the Christian Church.

But all this implies no more, than that Music existed in those Times, and even was had in great Honour and Estimation: For no Mention is made when or how it was learned, nor how far the Art had proceeded; only we are assured, that the Jewish Lyre was mounted with a considerable Number of Strings, and that *David* was the best Artist of his Time; and was employed as such for the curing of his Predecessor, King *Saul*, of his Phrenzy, as appears from *Samuel* xvi.

All that from this Time (that is from the Age of King *David*) can be known, and that not without some Confusion, is, that Music had a new Epoch in *Greece*, where it began by Singing: That their first Poets recited their own Compositions, with a certain Manner of Expression, elevating and lowering the Voice, as the Subject required, by the Help of the Lyre, an Instrument furnished with three Strings in some Provinces, and in others with four, which were so disposed, as to proceed from the Grave to the Acute, after the Manner of a Scale, and were sounded by the Touch of the Fingers, as the present Guitar, or Lute, is. From whence it follows, that the vocal Performances of this early Age, could be no more than simple and plain Recitative, after the Manner of the Orator, *C. Gracchus*, at *Rome*, who, according to the Testimony of *Cicero*, in his Treatise *de Oratore*, Book III. Sect. 60, made Use in speaking to the Public, not of a Lyre indeed, as mentioned above, but of the Sound of a small Flute, which a Person, who stood privately behind him, held, and whenever he either sunk his Voice too low, or raised it too high, he was by this Means, namely, by the Help of the Tone of this Instrument, recalled to the proper Pitch. According to some, the like had been practised before by *Demosthenes*, in *Greece*.

But as the Voices of Men are not of an equal Pitch, as to the Grave and the Acute, the four Strings, which were affixed to the Lyre, were not sufficient for the Purpose of every Voice; therefore they added to the former four, three other Strings, gradually rising higher; by which Means, they were now able to produce seven different Sounds, proceeding from the

the Grave to the Acute, as in the first Example, Plate I. These seven Strings were named, according to their Place, upon the Instrument, as follows.

The first was the most grave, and was called Hypate, which signifies the principal, or the most honourable.

The second, which was somewhat more acute, was termed Parhypate, that is, the next to Hypate.

The third was called Lycanos, which is as much as to say, that it was to be sounded by the indicial Finger.

The fourth they called Mese, because it was in the Middle of the seven Strings.

The fifth was called Paramese, which signifies the next to the Mese.

The sixth was termed Paranete, being next to the Nete, or last String.

The seventh they called Nete, which signifies the new or last String; and this was the most acute of all: For it was the Custom of these ancient Times, as it is at this Day, in Lutes, Violins, and other like Instruments, to place the largest, or Grave String, uppermost, and so descend gradually to the smallest, or Acute, which was put at the inferior Part of the Instrument.

The Degrees, or Intervals, between one Sound and another, were styled Tones and Semitones; the Tones were divided into greater and lesser Tones, the common Measure of which was called a Comma; there being none of these Commas contained in the greater Tone, and eight in the lesser.

From the first Grave, or largest String, called Hypate, to the second String, Parhypate, they estimated the Distance to be a Semitone, consisting of five Commas.

From the second to the third String Lycanos, the Distance was a greater Tone.

From the third to the fourth String, called Mese, they counted the Distance to be a Minor Tone.

From the fourth to the Paramese, or the fifth String, a Semitone.

From the fifth to the Paranete, or the sixth String, a greater Tone.

From the sixth to the seventh, or last String, a Minor Tone.

And thus those seven Strings made six Intervals; two of the greater Tone, two of the lesser Tone, and two of a Semitone, as in the above-mentioned Example the first, Plate I.

Such was the first Scale of Sounds amongst the *Greeks*, which in their Language was called System, and corresponds with the modern Scale, beginning at B, and rising thus, C, D, E, F, G, A, excepting, that in the modern Scale, there is no Destination of the Tones into greater or lesser, but they are considered as being all equal.

This System of the *Greeks* was called by the Name of Tetrachord Conjunction, because it was constructed of two Diateffarons, that is of two Fourths, each being composed of four Sounds in Sequence; so that the Sound which was the Acute, or highest Termination of the first Diateffaron, served for the first Grave Sound of the second; and both these Diateffarons (at present called Fourths) had the Order of their respective Strings, equal in Point of Interval, or Distance.

THE INTRODUCTION.

For from the first Grave String, or Hypate, they reckoned a Semitone.

From the second to the third, a greater Tone.

And from this to the fourth, a lesser Tone; and, beginning from the same fourth String, which by that Means came to be the first of the next Diatessaron, the Distance between it and the second String was a Semitone, between the second and third a greater Tone, and between the third and fourth, or last String of the whole Tetrachord Conjunction, a lesser Tone. In short, just as it is seen in the Order of the above Scale, or System, which being divided in the Manner above-mentioned, formed two equal Intervals, the one Grave, and the other Acute, as it is described in the second Example, Plate I.

The above Division into Tetrachords, served to no other Purpose, but to enable the Ancients to transfer the first Diatessaron into the Place of the second; that is to say, the four Grave Sounds into the four Acute, or the four Acute into the four Grave, for the Advantage of the Voice, as that was high or low. And the Lyre, when capable of these Transpositions, became a competent Regulator of different Voices in their different Pitch.

But as these Tones of the *Greeks* were estimated by the Comma, which was but an imaginary Measure, and had no Relation to any Thing certain, fixed, and known, and consequently was liable to be understood with more or less Latitude, the above System, or Scale of seven Sounds, was found to be imperfect, and, as it is said, was amended in the Time of Pythagoras. Probably one of their Singers, or Poets, which ever it was, visited the School of Pythagoras, in Italy, and learned from him (who appears, from History, to have been the first that found out the Method of explaining, to the Human Understanding, the Distance or Diversity of Sounds, as they were high or low) that if one Sound was added to the seven contained in the above Scale, such added Sound, whether it were high or low, would be found, in respect of the others, perfectly consonant with that which was farthest from it, whether high or low; and therefore in a Scale, which was to serve for a System of Sounds, the Octave, or consonant Sound, ought necessarily to be included; since it would prove a fixed, sensible, and intelligent Termination of an Interval or Compafs, that included in it every possible Division of Sounds, the Differences of which, like Parts relative to a Whole, could only be determined by this Means.

Thus they added to the seven Strings, and at the Top of the Lyre, the deep String that was wanting, which became Consonant with that acute String, which was farthest off; so that the String called Hypate, which was before the deepest, came now to be but the second deep String; and its Interval or Distance from the said String, which they called Proslambanomenos, that is to say the added, was a greater Tone; and the String Nete, which was the Seventh in the former Scale, came to be the Eighth acute String, perfectly consonant with the Proslambanomenos, which was the deepest in this their new Scale.

There subsisted between these two Extremes of the Proslambanomenos, and the Nete, an Interval certain and distinct, which included in it the other six Sounds of the Scale, every one at their proper Distance proportioned to the Whole; and in this Manner they improved their first System.

But, for the Information of those who are unskilled in Music, we shall give a short Explanation of that Interval, which by the *Greeks* was called Dia Pason, and by the modern Musicians the Octave, because it includes in it the whole Natural Scale of the Eight Primary Sounds of Music.

Every one knows, that any Sound whatsoever being given, another, and even many, may be given, that shall be exactly similar to it, and neither higher or lower. But those, who have no Knowledge of Music, have not perhaps observed, that over and above those similar

similar Sounds above-mentioned, which by Musicians are distinguished by the Name of Unisons, an Infinity of other Sounds may be given, either higher or lower, which though they are not Unisons, and similar one with another, because they are higher or lower, yet they are consimilar; so as they also seem to be only one Sound, though one be high and the other low, the higher being absorbed in the lower.

Of this any one may be sensible, by touching any Key of an Organ or Harpsichord, together with any other Key, at the Distance of an Octave; he will find, that the Grave, or deep Sound, absorbs in a Manner the Acute, or high one, and that it renders it, as it were, undistinguishable, the Acute Sound serving to no other Purpose, but to strengthen and enforce the Grave, or deep Sound. With good Reason, therefore, these consimilar Sounds, which are at the Distance of an Octave, are called by Musicians consonant Sounds, to distinguish them from those which being perfectly similar, are called Unisons: And all the Sounds which are contained in the aforesaid Interval of the Octave, have in like Manner every one, whether higher or lower, their consonant Octave; for which Reason, not only the first Octave, but also all the others, are capable of being enforced *in infinitum*, both in Height and in Depth, by additional Sounds.

It is also found, that beside the two extreme Sounds of the Octave, the fifth of the eight Sounds of the Octave, becomes also consonant with the first deep Sound. This is proved by Trial on the Organ, for touch whatsoever Key you please in the Stop, called Sesquialtera, in which Stop all the Keys are joined with their respective Fifths, the fifth Sound is so closely united with its deeper Sound, that it cannot be distinguished; and thus all the perfect Fifths, which consist of seven Semitones, are considered as consonant, tho' not so perfectly as the Octave.

We return now to the History of the Progress of Music in *Greece*.

As Nature, for our common Good, has implanted in the Breast of Man, the Love of Glory, and the Desire of excelling in great Actions, and useful and pleasing Arts and Knowledge, it is no Wonder that the musical Art, which sprang first in *Greece* from the emphatical Recitations of the Poets, acquiring afterwards, by Degrees, a greater Energy of Pronunciation, was improved into a Species of Singing, and at last into Melody, and spread itself in Progress of Time from Province to Province, but in different Manners, according to the Genius and Turn of the Inhabitants of the Country. From hence there arose a Necessity to increase continually the Number of the Strings of the Lyre; and moreover, new Instruments of Music, both of the Stringed and Wind Kind, were invented and introduced.

At length then to unite, and the better to distinguish, all the Sounds which they had successively introduced into their Lyre; a new System was established, and was called the greatest, and the unchangeable System; which was so termed, because it included, in their Opinion, every other lesser System, or Division whatsoever.

This System consisted of a Scale of sixteen Sounds, which formed their Disdiapason, or double Octave; that is, to their first Diapason, or Octave of the eight Primary Sounds, there was joined another Octave, or eight Sounds, similar to the first, but higher, as in Example III. Plate I.

But as the first Scale of seven Strings was divided into two lesser Systems of four Strings each, which were named as above, the Tetrachords conjoined, from whence the deep String, called the Proslambanomenos, which was the deepest Note in the System, was excluded. So in this new greatest System, there was annexed three other Tetrachords: From whence this System came to be divided into five Tetrachords, the Note Proslambanomenos being likewise excluded. Example IV. Plate I.

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The first of these five Tetrachords was called the Tetrachord Hypaton, the first String of which answering to the Note B natural, of our modern Scale, was named Hypate Hypaton, that is the Hypate of the Tetrachord Hypaton.

The second String of the same Tetrachord, which corresponds to the Note C, in our Scale, was called Parhypate Hypaton.

The third String was named Lycanos Hypaton, which is the Note D, in our Scale.

The fourth String, which finished the first Tetrachord, they called Hypate Meson, because it served for the first String of the second Tetrachord, which was called Meson, at the same Time that it was the fourth String of the first Tetrachord, which String or Sound corresponds with our present E.

The second String of the second Tetrachord Meson, was called Parhypate Meson, which is the Note F, in our present Scale.

The third String was Lycanos Meson, and the fourth Meson, the same as G and A, in our first Scale.

Then followed the third Tetrachord, called Synemmenon, or conjoined, which, according to the Order and Nature of the two first conjoined, ought to have the Distance or Interval of a Semitone, from the first to the second String; but as the said last String Meson, which coincides with the Note A, is distant a whole greater Tone from the next String, called Parameſe, which is our present Note B, they were obliged, in order to make the third Tetrachord unite with the former, in the same Order of Tones, to divide the Interval betwixt the two Strings Meson and Parameſe, by inserting a new Note, or Sound, between them, distant a Semitone from the preceding String, and a greater Tone from the following Note higher; which greater Tone consisted of nine Commas, viz. five between Hypate and Parhypate, or from B to C, and four from B flat to B natural, (from which Division arose the Distinction of the greater and lesser Semitone) and the first String of this Tetrachord, called Synemmenon, corresponding to A in the present Scale, was termed Meson Synemmenon, and was distant a greater Semitone from the second adjacent String, which was called Trite Synemmenon, corresponding to the present B flat.

The third String, which was distant a greater Tone, was called Paranete Synemmenon, that is C; and,

The fourth String, Nete Synemmenon, was supposed to be distant a Minor Tone from the third. In this Manner was the third Tetrachord constructed.

To pass then to the other two Tetrachords, which were called disjoined, and made up the five, into which the greatest System was divided, they came next to the String Parameſe, or B natural, which was separated from the String Meson, by the abovesaid new added String; and proceeding to the second String of the fourth Tetrachord, which was called Diazeugmenon (which signifies disjoined) they called it Trite Diazeugmenon, it being distant a Semitone from the first String, and a greater Tone from the third, called Paranete Diazeugmenon, which was distant a lesser Tone from the fourth, called Nete diazeugmenon: This fourth String then served, according to the Order and Method of the other Tetrachords, for the first String of the fifth, or last Tetrachord, which was named Hyperbolæon, that is, excelling or exceeding; the second String of this was named Trite Hyperbolæon, the third Paranete Hyperbolæon, and the fourth Nete Hyperbolæon.

These two Tetrachords were nothing more than a Transposition of the two former, an Octave higher, or more acute, which corresponded, as has been said, to the Notes B, C, D, E, and E, F, G, A, in our present Scale.

Now,

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Now, in the aforesaid Disposition of the five Tetrachords of the *Systema Maximum*, or greatest System, we must observe, that the third conjoined Tetrachord is not similar to the others; for since from the second String Trite Synemmenon, or B flat, inserted between Mese and Paramese, to the third String Paranete Synemmenon, or C, there is reckoned to be the Distance of a greater Tone, therefore from Paranete Synemmenon, or C, to Nete Synemmenon, or D, there ought only to be a lesser Tone; whereas the Interval betwixt C and D, in the first and fourth Tetrachords, was calculated to be a greater Tone, and not a lesser. From whence it appears, that, from the Time that the greatest System was divided into the aforesaid Tetrachords, the Artists did no longer regard the Distinction of the greater and lesser Tone, without which Distinction the aforesaid Tetrachords were all five equally divided into two Tones, and a Semitone, in the same Manner as it was divided by the *Pythagoreans*.

But at this Time, and for some Time after, the Ancients had no other Notes or Characters by which to distinguish and mark the Sounds of their Songs, but the above-mentioned Names, appropriated to the Strings of their Lyre: From whence it may be inferr'd, with the greatest Probability, that their Music consisted of nothing more than simple Melody, in the Nature of Recitative, or rather of a melodious Utterance, Pronunciation, or Expression, purposely adapted to their poetical Compositions; and *Strabo* asserts, that the ancient Poets rehearsed their Works to the Sound of some Instrument, catching and inveigling their Auditors by that Artifice.

Therefore, diversifying one after another, this their first simple Method, and introducing also a certain Species of Chanting, in the Manner of a Song, and this proceeding in divers Manners, according to the Difference of the Country, and Tastes of the Inhabitants, they, at length, in order to be able to give a Name to every Note which they were continually adding to their Instruments, changed the Names of the Strings into the Letters of their Alphabet, placing the first Letters to the gravest Sound, and the others in Sequence, proceeding from the gravest to the acutest.

But as the Science of Music received daily Improvement, sometimes in one Province, and sometimes in another, and from the public Places being introduced into Houses or Palaces, Temples and Theatres, and that in different Tastes and Manners, according to the particular Genius of the Inhabitants of the several Provinces; from thence there arose a Variety in the Order of their Scales, the Position or Places of the Sounds being by this greatly multiplied, and the Letters of the Alphabet not being sufficient to denominate all the different Places of every Sound, upon their Variation of Position, they were obliged to increase the Signs or Notes, or the Names taken from the Alphabet, by turning the Letters to the Right Hand or to the Left, or placing them above or below, and adding besides, certain Points, and other Characters.

This Diversification of Modes was afterwards distinguished by the Name of the Country, where each was principally used.

Aristoxenus, who appears to have been the first that wrote regularly, and perhaps the best on the Subject of Music, distributed the different Methods of Singing into fifteen Modes, and these again into three different Positions, according to the different Parts of the human Voice. Five were called Principals, which he placed in the Middle; five others were called Collaterals, but graver; and the remaining five Collaterals, but acuter.

The Principals in the Middle were the *Doric*, the *Iastic* or *Ionic*, the *Phrygian*, the *Eolic*, and the *Lydian*.

The five Collaterals on the Acute, or higher Part, were the same, but were distinguished by the Word Hyper, which signifies above, that is, the Hyper *Doric*, the Hyper *Iastic*, the Hyper *Phrygian*, the Hyper *Eolic*, and the Hyper *Lydian*.

In

In the same Manner to the Collaterals on the deep or grave Part, the Word Hypo was prefixed, meaning the inferior, as the Hypo *Doric*, Hypo *Iastic*, &c.

These fifteen Modes were distant a Semitone one from another ; the Diapason or Octave being divided into twelve Semitones, or Intervals, of thirteen Sounds, every Sound of the two Collaterals was distant from its respective principal, one Diatessaron, that is to say, a perfect fourth, consisting of five Semitones, as may be seen in Example V. Plate I. wherein the fifteen Modes are placed over the Names used in our present Scale, which correspond with the ancient Greek Scale, or Diapason, according to the Method of Aristoxenus.

Casiodorus, writing to Boetius, says, in the second Book of his Epistle, that the artificial Music has fifteen Modes, agreeing in this with Aristoxenus.

Euclid, who follows Aristoxenus too, gives us but thirteen, at a Semitone's Distance one from another ; that is, he went not beyond the last Semitone of the Diapason, which he considered, as being divided, according to the Doctrine of Aristoxenus, into twelve Semitones, and thirteen Sounds. He omitted the Hyper Aeolic, and Hyper Lydian, placed by Aristoxenus amongst the high Collaterals, beyond the last high Note of the Diapason.

Censorinus also makes Mention of those thirteen Modes.

Plato, speaking occasionally of those Modes, in the third Book of his Republic, reckons them six ; and in another Place, namely, in the Piece called Laches, he mentions only four.

Apuleius talks of the Aeolic, the Iastic, the Lydian, the Phrygian, and the Doric.

Aristides Quintilian mentions six, the Doric, the Phrygian, the Iastic, the Lydian, the Mixolydian, and the Syntonydian.

Julius Pollux reckons eight, Lucian four ; and many, considering Greece as divided into Doria, Aeolia, and Ionia, and that these were its proper Bounds, have named only the Doric, the Aeolic, and the Ionic.

Plutarch asserts, that the ancient Modes were no more than three, that is, the Doric, the Phrygian, and the Lydian.

Ptolomy, with whom agrees Boetius, considers the Doric, the Phrygian and the Lydian, as Principals. The Hypo Dorian, the Hypo Phrygian, and the Hypo Lydian, as Collaterals.

Apuleius, and Martian Capella, changed the Order ; Apuleius placing the Aeolic first, and Martian Capella the Lydian.

Lucian gave the first Place to the Phrygian, and many others, whom, for Brevity Sake, we forbear to mention, have given different Names to the Modes, and have placed them in a different Manner ; for which Reason it is impossible, in speaking of the ancient Modes, to give any very distinct or certain Account of them, either as to their Number, their Names, Order, or Situation.

Strabo, in the Place above quoted, speaking of the ancient Poets, says, that as their Poetry consisted of different Measures, so the Methods of rehearsing of it were different, and one could not be used for another. Their Verses having a certain determinate Order, they distributed them into three Classes, one of which was the Dittyrambic, the other the Tragic, and the third the Comic. To each of these Classes they assigned a proper Manner of Recitative ; from whence it came to pass, that the Chants, or Music, derived from the Nature of the poetical Compositions, were called Modes. If the Verses related to any doleful Matter, they called it the Doleful Mode ; if to any Thing Bacchanalian, the Bacchic, and so of the rest ; and as the Nations were different, and every one had its proper

proper Manner of reciting and singing peculiar to itself, they consequently denominated those Modes from the Countries where they were principally used, as the *Phrygian*, the *Doric*, the *Lydian*, &c. The *Doric* Mode was used by the People of *Doria*, in that Part of *Achaia*, which is now called the *Morea*; and this Mode partook something both of the *Lydian* and the *Phrygian*, that is, both of the soft and the harsh. The *Phrygian* Mode was employed by certain People in *Asia Minor*, who being by Nature of a fierce and cruel Disposition, it was consequently of a severe and furious Quality. The *Lydian* Mode was introduced by the *Lydians*, a People of the *Great Asia*, of a cheerful and gay Temper; and from thence it was called the moderate, or modest Mode. This is the Account given us by the aforesaid Author.

The above three Classes, mentioned by the same Author, were called Genera by the Greeks, which three Genera they distinguished into six Colours, as they called them. One of those Genera was named the Diatonic, another the Chromatic, and the other Enharmonic. It is probable that the Dithyrambic was applied to the Diatonic, the Tragic to the Chromatic, and the Nomic, or Comic, to the Enharmonic. To the Enharmonic Genus was assigned one Colour, two to the Diatonic, and three to the Chromatic; which was called Chromatic, or coloured, because more Colours were assigned to it than to the other two.

Every one of the three Genera, with their Colours, were constructed by the Diateffaron, being divided, by different Intervals, into four Strings. The two extreme Strings, of each Tetrachord of the greatest System, were called fixed or immovable: The other two, or middle Strings, were moveable, because they were differently tuned, according as each Genus, and its Colours, required. Every one of the three Genera, and its Colours, had their proper Species, which were divided in the same Intervals of its Genus and Colour, but in different Order, and in this Manner was distinguished every Mode, *Phrygian*, *Lydian*, &c.

The above Intervals, relating to every one of the Genera, and their Colours, were differently divided by some Authors, who followed the first Division of the first System of seven Strings, in Tones and Semitones, Major and Minor; which Division cannot subsist in the Transposition of the Scale, as has been demonstrated in the third Tetrachord of the greatest System. But the Measure of the abovesaid Intervals was justly computed by the Followers of *Pythagoras*, who considered every Tetrachord of the same greatest System, as composed of two Major Tones, one Semitone of four Commas; only that the Diateffaron constructed in this Manner, consisting of twenty-two Commas, the smallest Intervals of the Genera become divided by Fractions, and consequently not so clearly intelligible to those who are not so well acquainted with nice Calculations. Therefore the best and the easiest Explanation of the above Intervals was made by *Aristoxenus*, as it is described by *Euclid*, (*Introd. Harm.*) *Aristoxenus* divided the Tone into twelve Parts, six of which he gave to the Semitone. In this Manner the Diateffaron was composed of thirty Parts, being two Tones, and a Semitone. Four Parts of the above twelve Parts he assigned to the small Interval of the Chromatic, which was called Diesis Trientalis, namely, a third Part of a Tone; to the smallest Interval of the Enharmonic, three Parts of the above twelve, which was called the quadrantal Diesis Enharmonic, namely, the fourth Part of a Tone. The Enharmonic Genus, being only distinguished by one Colour, was composed of two quadrantal Diesis, and of one Ditone, namely, from the first String to the second, one of the said Diesis, or Quarter of a Tone; another like Diesis from the second to the third String, and one Interval of a Ditone from the third String to the fourth; which three Intervals compose the perfect Diateffaron.

The Diatonic Genus was distinguished by two Colours, one of which was named Molle, and this was formed by three Intervals, one of six Parts, namely, a Semitone; another of nine Parts, or three Quarters of a Tone, and the other of fifteen Parts, namely, a Tone, and one Quarter of a Tone. The other Colour was called Syntonus, the Intervals whereof

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were six, twelve, and twelve, or one Semitone, one Tone and one Tone; and this is the common Diatonic, which may be applied to the present natural Scale. The Chromatic was distinguished by three Colours; the first was named Molle, and was composed of two Intervals, each of one Triental Diesis, which is a third Part of a Tone, and another Interval, consisting of twenty two Parts, namely, one Tone, and ten Twelfths of a Tone, which three Intervals together make the perfect Diateffaron. The second Colour was named Sescuplum, or Hemiolion; and this was composed of two Intervals, each consisting of four Parts, and an Half of the twelve Parts, into which the Tone was divided; and of another Interval consisting of a Tone, and three Quarters of a Tone, or twenty-two Twelfths. The third Colour was named Toniæum, and was composed of three Intervals of six, six, and eighteen Parts, namely, from the first String to the second six Parts, or one Semitone, from the second to the third String, six other Parts, and from the third String to the fourth, an Interval of one Tone and an Half, or three Semitones. And in this Manner the three Genera, and their respective Colours, were divided.

Of the above six Colours, which belong to the three Genera, only the Syntonum Diatonic is the natural, which may be applied to the present natural Scale, in ascending and descending gradually, and by Skips, without any Alteration. The Toniæum Chromatic may also be applied to the present Scale, with its third Minor, being composed by three Semitones; but because it is composed of one undivided Interval of three Semitones, can only ascend and descend by Skips, but not gradually.

The other four Colours have all their Intervals unnatural, not only the lesser, but also the greater; it being impossible to distinguish the Difference between a third Part and a fourth Part of a Tone, by the common natural Sensation; besides the Difficulty, or rather Impracticability of a just Intonation of those lesser Intervals, and also of the larger Intervals, as the incomposite Intervals of nine, fifteen, twenty-one, and twenty-two twelfth Parts of a Tone. Therefore it is natural to suppose, that the Chromatic, being applied to Tragic Compositions, as before said, one of its Colours might be used to express Pain, Cruelty, or Rage, and the other to express Grief, Horror, or Despair; and the Enharmonic being applied to Comedy, the Comedians might endeavour to use the Intervals described in its Colour. But we much question whether those Intervals were executed with an exact and just Intonation, which seems impracticable, and think it more probable, that the Performers of that Time, in their Manner of Singing in the Compsas of these Colours, did much the same Thing as is done at this present Time by some Performers, who, to shew their Ability, ascend or descend two or more Tones with their Voices, or Instruments, by extremely small and undistinguishable Intervals; or, as it is done by some Actors in the Comic Music, who proceed with their Voices in Imitation of Laughing or Crying, or some other charged Expression.

This is in brief all which can be recovered of the ancient Greek Music, their Systems, Modes, and Genera, which can serve no other Purpose, but to gratify the Curiosity, being all unnecessary to the Understanding and Practice of the present Music.

In the above State and Condition, Music continued in *Greece* till it was subdued and conquered by the *Romans*; and nearly in the same Manner was the Art exercised by the *Romans*, without any remarkable Alteration, till the fourth Century, when the Emperor *Constantine* the Great embraced the Christian Religion, in Consequence whereof Churches were publickly opened for the Use of his Christian Subjects.

Not long after that Time St. *Ambrose*, Bishop of *Milan*, selected four *Greek* Modes, namely the *Doric*, the *Pbrygian*, the *Lydian*, and the *Mixo Lydian*, in order to apply them to the Psalms and Hymns of his Church of *Milan*: From whence afterwards Music entered gradually, and was spread into the other Churches.

In the same Century, in the Time of *Boetius*, the *Greek* Letters which were before used in the

the greatest or unchangeable System, as it was called, were altered, and in their Place the Letters of the *Roman Alphabet* were put, beginning with A, which was set against the Note Proslabanomenos of the first deep Note of that System, and from thence proceeding gradually, as far as the Letter P, which Letter was assigned to the Note Nete-hyperbolaeon, the acuteſt in the System. But afterwards the Roman Letters were restrained by Pope *Gregory the Great*, to the first seven, A, B, C, D, E, F, G. After which the same Letters followed again, but in the small Character, to express the next following Octave above; and thus they left out all the other Letters from H to P, as uſeless, and only tending to Confusion. The ſecond Octave Acute was here conſidered as only correspondent to the firſt.

This Pope added four others of the *Greek Modes*, to wit, the Hypo *Doric*, the Hypo *Phrygian*, the Hypo *Lydian*, and the Hypomixo *Lydian*, to those four which had been chosen by St. *Ambroſe*.

The four chosen by St. *Ambroſe* were named authentic, and preſelect; and the four which were added were called plagal, or ſubſervient. And these eight Tones were united two by two, one authentic, the other plagal, namely, the *Doric* with the Hypo *Doric*, the *Phrygian* with the Hypo *Phrygian*, the *Lydian* with the Hypo *Lydian*, and the Mixo *Lydian* with the Hypomixo *Lydian*.

Every two Modes thus united were reckoned as only one, the *Doric* and Hypo *Doric*, called Protos, or firſt, the *Phrygian* and Hypo *Phrygian*, called Deuteros, or ſecond, the *Lydian* and Hypo *Lydian*, called Tritos, or third, and the Mixo *Lydian* and the Hypomixo *Lydian*, called Tetartos, or fourth. But thoſe Modes were afterwards ſeparated, and the Authentic divided and diſtinguished from the Plagal, in the following Order, namely, the firſt Authentic, the ſecond Plagal, the third Authentic, the fourth Plagal, &c. the Authentic being always placed the firſt as preſelect, and the Plagal after, as ſubſervient to the Authentic. The Diapente being assigned for the principal Form of the Mode, and the Diateſſaron for the Difference, in a Manner, that when the Diateſſaron was found in the acute Part of the Diapafon, as A, E, A, and the like, the Mode was authentic, and when the Diateſſaron was in the lower, or grave Part of the Diapafon, as A, D, A, the Mode was plagal. And in this Manner every Mode authentic and plagal had a Place in one of the ſeven Species of the Diapafon (which ſeven Species were reckoned beginning from A to A, B to B, and ſo of the rest, being in all ſeven Octaves) and when the Octave was divided geometrically, the Mode was authentic, and when divided arithmetically, was plagal; but the firſt Chord was always the grave Chord of the Diapente, to both the Authentic and the Plagal.

Guido Aretino, and his Followers, divided arithmetically only the firſt, ſecond, and third Species, geometrically the fifth, ſixth, and seventh, and the fourth Species arithmetically and geometrically. But *Henrico Glareano* obſerving, that every one of the ſeven Species of Octave may be divided both arithmetically and geometrically, except the ſecond Species, beginning at the Chord Hypate, or B, and the fifth beginning at Parameſe, or F, B not having its perfect Diapente, and F its perfect Diateſſaron, in the Diatonic System, augmented the Tones to twelve, beginning always at A.

Zarlino in the ſame Manner divided the ſeveral Species into twelve; but finding that when the firſt Species began in A, ſome Notes of the *Cantus Firmus*, or plain Chant, were not in their natural Situation, he, in his ſecond Edition of his harmonic Institutions, began the firſt Species in C, following in that the Opinion of *Ptolomy*, according to which the Order of the firſt Species was Tone, Tone, and Semitone. But these Alterations were not received by the principal Churches of *Italy*, ſtill adhering to the eight Tones or Modes of *Guido Aretino*; and thoſe eight Tones are called the Tones of the Church, under the Names of *Cantus Firmus*, or *Planus*, and *Cantus Gregorianus*; and in the principal Churches of *Italy*, particularly thoſe in the Dutchy of *Milan*, which followed the *Ambroſian* Ritual, it never was,

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nor is now permitted, to the Precentors, or Masters of the Choir, to transgress the Order of the Modes or Tones of *Guido Aretino*, in the Progression and Modulation of their Compositions, in what is called Alla Breve for the Chapel.

This has been, and is now punctually observed, out of Veneration for the two great Personages who first introduced those Modes or Tones into the Church. However, it occasioned amongst the Professors themselves, a Confusion and Difference of Opinion, the Rules being ill understood, and never perfectly applicable to Harmony, which was not at all tasted by the *Greeks*, or old *Romans*. And this Confusion arose from mixing of the imperfect Greek Modulations, as every one may discern, by examining the above-mentioned Tones of the Church, whose middle and final Cadences are almost all imperfect and improper for true harmonical Combination and Progression; as may be seen in the *Te Deum* printed in the Edition of the seven *Greek Authors* published at *Amsterdam* by *Meibomius*.

In the eleventh Century it may be said, that the Art of Music entered from its Childhood into Youth, under the Tuition and Direction of a Benedictine Monk, the aforementioned *Guido Aretino*, so named from being of the City of *Arezzo*, in *Tuscany*.

He, in the first Place, reformed the abovesaid greatest System of the *Greeks*, as being incongruous with Harmony, of which he seems to have been the first that had any Knowledge, and distinguished it from Melody, as will be seen below.

The Order of the abovesaid greatest System could serve for no other Purpose almost, but simple Melody.

As to the first System of the seven Strings, or Tetrachord conjunct, it began with the Chord Hypate (B of the present System) distant a Semitone from the next Chord less grave Parhypate (now C.) This B could not subsist either as a first principal Note or Sound, or as a Final, since, being distant a Semitone from its following Note, it could not be accented; it being necessary to have the Accent fall upon a Note, between which and the next Note above it there is an entire Tone. This any one may try by solfaing the Scale; for he will find, that Mi, which is a Semitone distant from Fa, will naturally pass to, and rest itself upon the same Fa, upon which Fa, as an accented Note, the Melody perfectly terminates. The final Note can only happen to be Mi, as a seconday Note in the harmonic fundamental Combination, and by Way of Suspension of the Harmony, as in a suspended Cadence, but never as a principal Note of Harmony. There must be an Interval of a Semitone between the principal Note of the Scale, and an Interval of a full Tone between the principal Note of the Scale, and the next higher Note, it being necessary for the Melody to proceed by these two Intervals, to fall upon the principal Note of the Scale; as clearly appears in the Cadences in four Parts, where the Bass descends a Fifth, or ascends a Fourth, the Mi Semitone, which makes the third to the Bass, ascends to the Octave, and the superior Part, which serves as a perfect Fifth to the same Bass Note, descends a full Tone to the Octave of the Bass, or may ascend to the third; consequently the Note Hypate, or B, distant but a Semitone from its next Acute Note, can only serve as a third Harmonic to the fundamental Note; and the next Note superior to this harmonic Third, must have an Interval of a full Tone between it and the Note next above it, which must answer the Purpose of a perfect Fifth to the fundamental Bass, in order that the said Fifth and Third may fall together, in Consonance, into the principal Note of the Octave.

Now the System beginning with the Chord Proslambanomenos, the first deep Note of the greatest System, succeeds much worse in respect of Harmony. This System being far from the true natural Order, called by the *Greeks* the Diatonic, the Note Proslambanomenos (which is A in the modern Scale) can be neither Principal nor Middle, neither can it serve as an Harmonic Note to the Principal, nor to its fundamental fifth Note, in its first Order of Combination. The principal Note of a Scale, which serves as a System, ought

ought to be considered as the Mother of all the Sounds attending it, they being all included in it, and its consonant Octave above; and the fifth, its intermediate Sound, being consonant with the said principal Note, is the Guide that directs the Progression, by ascending or descending a Fifth, and at last conducts the Harmony to its Principal; as will be more fully explained in its Place, in the following Book.

A Scale of Sounds, which are not stable, but subject to vary, can never be a natural System of Sounds, which ought to be fixed and unalterable. The Chord Proslambanomenos, or A, which stands at the Head of the said greatest System, has its third Sound naturally flat; and in descending an Octave from A to A, the sixth and seventh are both naturally flat; but in ascending the sixth and seventh, must both be altered a Semitone higher, without which the Octave cannot be ascended gradually; consequently here would be required two Scales, one for ascending, and the other for descending.

The Melody can very easily descend the Octave from A Acute to A below, by a natural, or Diatonic Gradation, but then in ascending to the said A Acute, you can never arrive there, without changing the sixth and seventh Sounds a Semitone higher; for the Distance between the seventh and Octave can never be more than a Semitone, in the natural Order. Therefore a Scale, which has its third Sound distant from the first one Tone, and one Semitone, that is a third Minor, cannot be the natural Scale, because the fourth Note must have also the Minor Third, which must be altered in ascending the Scale. From hence it is clear, that in the true natural Scale, the principal Note must have its third Sound at the Distance of two Tones, that is of a greater Third; from whence it follows, that the Sixth comes to be a greater Sixth, which sixth Note serves for a greater Third to the fourth Note, which always has its third Note similar to that of the Principal; that is greater, if it be greater; and less, if it be less. So likewise the seventh Note, which serves for a greater, or Major Third to the middle Note the Fifth, which is the fundamental Guide, ought to be greater; and in this Manner the Scale remains unalterable, and the principal Note of it must easily be known; for since in the natural Scale there are only three Notes, which have the greater Thirds, one of these three must be the Principal; but then as the Principal must have not only the greater Third, but also the perfect Fourth, perfect Fifth, and greater Seventh; the Fourth, though it has a Major Third, perfect Fifth, and greater Seventh, nevertheless, as its Fourth is not just, but false, cannot be a Principal.

In like Manner the fifth Note, though it has a Major Third, and perfect Fourth and Fifth, yet, as the Seventh is Minor, it cannot be a principal Note of the Scale. From whence it is evident, that the principal Note of the natural Scale must be the Note C, or Parhypate; and that the *Greek* Systems, both the old one of seven Strings, and the greatest, or immoveable, were ill disposed, beginning with the Chord Hypate, or B, in the first System, and the Chord Proslambanomenos, or A in the greatest System.

It is manifest, from what has been said, that *Guido Aretino* had good Reason for reforming the ancient System, by annexing a new Sound to the old deep one, which new Sound he called Gamma (the present G) being distant a Tone, in Depth, from the Proslambanomenos of the ancient greatest System.

He did not increase the Number of Sounds, by adding the Note G, for the Sake, as some have imagined, of perpetuating by that Letter, his own Name, *Guido*, as the Inventor of this System; neither did he do it, as others have more modestly asserted, to preserve the Memorial of the Commencement of Music in *Greece*. It was not owing to these Causes, we say, but to pure Necessity, which obliged him to put the Scale in such Order, as would best answer the Purpose of Harmony; and if he began not the Scale by its true principal Sound, which is C, it was probably owing to his Disinclination to change the whole Order of Letters of the Alphabet, as established by Pope *Gregory*, or perhaps to his Veneration for him. However, beginning with the Letter G, he obtained the lower

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Octave of G, the middle Sound of the natural Scale, and the Guide of Progression in the same Scale; and he obtained also along with it the Octave Sound of the seventh Note B, which served him for a greater Third to the same G; and by this Means the Harmonic Order was preserved.

Guido not only mended the old greater System, but he also introduced six Monosyllables, in order therewith to learn and practise the Art of Singing. These Monosyllables were *ut*, *re*, *mi*, *fa*, *sol*, *la*, which, it is said, he took from a Strophe, or Stanza, of a *Latin Hymn*, written in Honour of St. *John Baptist*, of which he chose the first and sixth Syllables of every Verse, as is here seen.

Ut queant Lætis Resonare fibris,
 1 ————— 2 —————
Mira gestorum Famuli tuorum
 3 ————— 4 —————
Solve polluti Labii reatum.
 5 ————— 6 —————

SANCTE JOHANNES.

It was observed above, that the first Letters of the *Roman Alphabet* were employed in the ancient System; and that those were afterwards restrained by Pope *Gregory* to the first seven. These served the Purpose of learning to sing, by applying to its correspondent Note the Letter that denominated it. But *Guido* perhaps observing, that those Letters expressed the Progression of the Sounds in a very indistinct Manner, by Reason, that in pronouncing each Consonant, the Letter E is subjoined thereto, as, BE, CE, DE, &c. at every Sound, however different they were, nothing was heard but a Repetition of the same Termination, except when the Note fell upon the Letter A, and that this Uniformity, or Similiarity of Terminations, could not but breed Confusion; and observing, perhaps, in reciting the Office employed on the Festival of St. *John Baptist*, that the first and sixth Syllable of the first Strophe of the above-mentioned Hymn, contained all the five *Italian Vowels*, he thought proper to make Choice of them, and by their Means to render the Sounds more distinct in going through them with the Voice. But as the said six Monosyllables were to be assigned to the eight Notes, or Sounds of the Scale, by which Means, in ascending from the lowest to the highest, two of them must necessarily be repeated.

Therefore he distinguished them by these different Stations, every one containing a Scale of six gradual Sounds; and he called these different Scales by the *Greek Name Hexachord*, (that is, a Succession of six Sounds) as the *Greeks* called the different Partitions of their Systems in four Strings, or Sounds, Tetrachords, as mentioned before.

The first Hexachord began with the Note Gamma, or G, comprehending G, A, B, C, D, E, and this he called the Hexachord of B Durum, or B natural.

The second Hexachord began with the Note C, (being the fourth Note of his System) and comprehended C, D, E, F, G, A; and this he called the natural Hexachord.

The third Hexachord began with the Note F, the seventh Note in his System, and comprehended the Notes, F, G, A, Bb, C, D; and this he called the Hexachord of B Mole, because the fourth Note of the Scale must be altered with a B Mole, or Flat.

For the better Distinction of these Hexachords, he annexed to the Letters, which were already appropriated to the Notes of his System, the six different Monosyllables, which, according to the Change of their Situation, they have in the three different Hexachords.

Thus to the Letter ascribed to the deepest Note Gamma, he annexed *ut*, and called it *Gammut*.

To

To the second Letter he annexed *Re*, and called it *A re*.

To the third Letter *B*, he annexed *mi*, and called it *B mi*.

To the fourth Note *C*, he annexed the Syllables *Fa* and *ut*, and called it *C Fa ut*, namely, *fa* as the fourth Note belonging to the Hexachord of Gammut; and *ut* as the first Note of the Hexachord of *C*.

To the following Note *D*, he annexed the Syllables *Sol* and *re*, and called it *D, sol, re*, namely, *Sol* as the fifth Note in the Hexachord of Gammut, and *re*, as the second Note of the Hexachord of *C*.

To *E*, the next Letter, he annexed the Syllables *La* and *Mi*, and called it *E la mi*, namely *La*, as the sixth and last Note of the first Hexachord *G*, and *Mi* as the third Note of the second Hexachord of *C*.

F, the following Letter in Acute, was called *Fa*, when considered as the fourth Note of the Hexachord of *C*, and *ut* as the first Note of the third Hexachord *F*, and together was named, *F, fa, ut*.

The next Letter *G* was called *G, sol, re, ut*. *Sol* as the fifth Note in the Hexachord of *C*, *re*, as the second Note in the Hexachord of *F*, and *ut* as the first Note of its own Hexachord, which is a Repetition of the first Hexachord of Gammut, an Octave higher.

The next Letter *A* was named *A, La, mi, re*, namely *La*, as the sixth Note in the second Hexachord of *C*, *Mi* as the third Note in the third Hexachord of *F*, and *re* as the second Note in the fourth Hexachord *G*.

The following Letter *B*, was called *B, fa, mi*; *Mi* as the third Note of the fourth Hexachord *G*, which being a Repetition (as before said) of the first Hexachord Gammut, is consequently of the *B durum Classe*; and *Fa*, as it is the fourth Note in the Octave of the third Hexachord *F*, which is in the Class of *b Mole*, because the same Letter *B* being *durum*, or natural, would exceed, by a Semitone, the perfect and just Fourth, in the above Hexachord of *F*; consequently *B* must be diminished a Semitone with a *b Mole* to make it a perfect Fourth; as has been explained before, in the Description of the third Tetrachord of the greatest Greek System.

The other following Letters are named and disposed in the Manner clearly described in the sixth and seventh Examples, Plates II. and III. both containing seven successive Hexachords. By the Means above-mentioned, the ancient greatest System was augmented with the Note Gamma in the Grave, and with five Notes more in Acute, as appears in Plate III. Example VII. And this Augmentation was necessary for the proper Distribution into the divers Scales belonging to the different Parts, Grave, Middle, and Acute, in Harmonic Compositions.

By the Help of the above Monosyllables, applied to the forementioned Hexachords, *Guido* taught his Disciples to study and practise the Art of Singing. And, for a better Help to the Memory, he disposed the same Hexachords, in their Order, upon the left Hand, as is shewn in the sixth Example, Plate II. above-mentioned, explaining the divers Mutations in ascending and descending the whole Scale. In ascending the Scale, the deepest Note *Gama*, or *G*, was called *Ut*; *A*, the second Note, *Re*; *B*, the third Note, *Mi*; *C*, the fourth Note of the same Hexachord of *G*, was called *Fa*; *D*, the following Note, *Sol*; and *E*, the last Note of the same Hexachord, *La*, when they proceeded no higher; but if they went on ascending to *F*, *D* was called *Re*, *E mi*, *F Fa*, *G Sol*, and *A La*; and, proceeding higher, *G* was called *Re*, *A mi*, *B* being flat *Fa*, *C Sol*, and *D La*; but ascending to the next Note *E*, *D* was called *Re*, *E Mi*, *F Fa*, *G Sol*, and *A La*;

La; and proceeding to the next Notes still more acute, *A* was called *Re*, *B mi*; the rest in the same Order as above explained, changing the first Hexachord into the second, the second into the third, the third into the fourth, &c. and when these Hexachords, or the whole Scale, is transposed higher or lower, the general Rule is, that the Note which is marked with a Diesis, or Sharp, must be called *Mi*, the next below it *Re*, and the Note next above it *Fa*. On the contrary, when a Note is contra marked with a *b Mole*, or flat, that Note must be called *Fa*, consequently the Note next below it *Mi*, and the Note next above it *Sol*, in ascending the Scale by a sharp Third, and *Re* in ascending by a flat Third.

By the Help of the different Applications of the above Monosyllables to the Notes, every one learned how to distinguish immediately the Scales, in all the Transpositions that might happen; a Method of Practice which continues to this Day in *Italy*, under the Name of Solfaing, and in some other Countries, with some Variation.

The Monosyllable *Ut* was afterwards changed into *Do*; because that in the *Italian* Pronounciation, the Sound of the Vowel *U* is not thought so pleasing and agreeable, nor so proper for Music.

Guido also changed the ancient Manner of writing Music. The Method before was to use the Letters of the Alphabet, by which the several Notes of the Scale were distinguished; and to write them all upon one Line, one after another, in Length, as mentioned by *Boetius*. But *Guido* substituted in their Place certain Points disposed upon, and between, four Lines, and afterwards five, from whence came the Name of Counterpoint, in Composition of Music, and prefixed, at the Beginning of one of the Lines, one of the Letters, by which all the Points upon and between every Line were regulated and ascertained. For Example, the Letter *C* being placed at the Beginning of any Line, the Point upon that Line was called and esteemed the Note *C*, the Point in the Space next it was *D*, the Point on the next Line *E*; and so the rest in Sequence. So in descending, the first Point, or Note, in the Space next below the Line, marked with *C*, was *B*, that on the Line next below *A*, and so from Space to Line, the others followed progresively; and when any other Letter was placed upon any of the Lines, the Point upon that Line was the Note or Sound denominated by that Letter; and all the Points upon the Lines and Spaces above and below were reckoned from the Line marked with the Letter, so that, from any Letter placed upon any Line, the Order of the Scale, both higher and lower, was immediately known.

But the greatest Improvement which *Guido* made in the Science of Music, was the Introduction of Harmony, by joining it to Melody, and forming therewith different Compositions of two, three, and four Parts. These Parts consisted of different Notes, varying in their Order, one amongst another, but united harmoniously together, so as to afford infinite Pleasure to the Ear. This Harmony was as simple as possible, consisting only of a Combination of the first or principal Note, with its Third, Fifth, and Octave, which he disposed in the most agreeable and harmonious Manner. *Guido* adapted this Harmony to the Chants, or Tones of the Church.

He also published a Treatise of Music under the Title of *Micrologus*, with his *Introductorium*, and also an *Antiphonaicum*, for the Use of the Church; for which Cardinal *Baronus*, in his Annals, inserted the following remarkable Note.

His quoque postremis temporibus, scilicet, Benedicti Octavi Papae, Guidus Aretinus Professione Monacus, Musicus insignis innotuit, qui, maxima omnium admiratione, novam adscendi Musicam rationem invenit; ita ut puer paucis mensibus disceret, quod pluribus annis vix homo quilibet, pollens ingenio, ante capere potuisset, qua etiam de Causa Romanam vocatus est ab eodem Benedicto Pontifice, postea vero Joanne vigesimo Benedicti Successore anno aetatis trigesima

trigesimo quarto, edidit de Musica Librum, quem Micrologum nuncupatum dedicavit Theobaldo Episcopo Aretino.

All these Improvements, which *Guido* introduced, extending themselves, by Degrees, from *Italy* into the other Christian Kingdoms, and States of *Europe*, were generally received by the whole Church; and thus the Precentors, or Masters of the Choir, in every particular Church, who before had only taught the Chant Choral, called *Cantus Firmus*, or *Gregorian* Chant, laid themselves out to become Imitators of *Guido*; and pursuing his Rules, to grow even Composers; every one striving not only to join Parts, in an harmonical Way, to the *Cantus Firmus*, or *Gregorian* Chant, but even to devise, and invent new Tones, or Specimens of Melody: Insomuch, that by the Ease and Facility of Solfaing, Melody itself made great Advances, and became greatly varied from the ancient *Greek* and *Roman* Manner.

However, the Melody of this Age being composed of Notes so long, that one of them sometimes served for a whole Period, the new Improvements, which were daily making, required the breaking of those long Notes into shorter Times and Measures; so that the original Notes and Points introduced by *Guido*, were daily found to be insufficient for the Purpose of writing and expressing the new invented Strains.

To remedy this Defect, an Advocate of the Parliament of *Paris*, called *John de Muris*, who was a Lover of Music, and flourished in the fourteenth Century, invented certain new Notes or Characters, by which the different Lengths, or Times of Sounds, might be commodiously expressed, which proved of great Advantage and Benefit towards the farther Improvement of Melody.

These Marks, or Characters of Music, were of different Figures, to denote the different Length of the Time, and formed in the Manner described in Plate IV. Example VIII. Fig. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

The first Characters, Figure 1, was called Maxima, and contained two Longs: The Long (described in the second Fig.) contained two Breves: The Breve (third Fig.) two Semibreves: The Semibreve (fourth Fig.) two Minims: The Minim (fifth Fig.) two Semiminims, or Crotchets: The Semi-minim (Fig. 6.) two Chromas or Quavers (Fig. 7.) And in Process of Time the Semi-chroma, or Semi-quaver, two of which make one Chroma, or Quaver; and afterwards Bischroma, or Hemisemi-quaver, two of which make one Semi-chroma, or Semi-quaver, and a Note equal to half of the triple Bischroma, were added, as in the Fig. 8, 9, and 10.

Under the above Notes are shewn the correspondent Marks, which serve to indicate the Times and Measures which the particular Parts are to observe, in resting or joining with the others; each of the Marks expressing the same Number of Measures as its corresponding Note, namely, the Note called Maxima, and its corresponding Rest, contain eight Measures: The Long in the second Fig. and its corresponding Rest, contain four Measures: The Breve two Measures, the Semi-breve one Measure; the Minim half a Measure; the Semi-minim a Quarter of a Measure; the Chroma half a Quarter; eight Chromas, sixteen Semi-chromas, and thirty-two Bischromas being contained in one Measure, as appears in the Figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, Plate IV.

Now, by Means of these Measures, the Time was divided into two, four, and eight Parts: But then there being apparently an Occasion for a Measure, which should divide the Time into three Parts; therefore the Measures were distinguished into two Sorts; namely, of common Time and triple Time. In the common or ordinary Time, marked as in Plate V. Example IX. each Measure is divided into four Parts, except in the Alla Breve, in which each Measure, containing one Breve, is divided in two Parts: The same for the Time *a Capella*, or Chapel Time, which contains one Semi-breve, or two Minims.

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Besides these Marks, there have been added to the Character, that distinguished the common Time, called the ordinary Time, the following other Marks, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{5}{4}$, $\frac{7}{4}$, represented in the above Plate V. Example IX.

The first containing two Semi-minims, or four Chromas; the second four Chromas, or eight Semi-chromas; the third six Semi-chromas, and the last twelve Semi-chromas.

In the triple Time the ancient Marks have been discarded; and at present there are but three Sorts, whereof the first is $\frac{2}{3}$, the second $\frac{4}{3}$, the third $\frac{5}{3}$, by which is meant, that the first contains one Semi-breve, and one Minim, or three Minims; the second three Semi-minims, and the third three Chromas. There are in Use also other Signs, or Figures, which partake, as it were, of both the common and triple Time: These are represented thus, $\frac{6}{4}$, $\frac{6}{5}$, and may be divided into three, and into two Times, which is to be found by the Accent of the Notes in their Progression. The first Mark generally serves for triple Time, the second expresses rather common Time, *to wit*, when they are Semichromas tied together by three; for when they are all tied together, they appertain to triple Time.

To these Notes also, when it was necessary, was added a Point, which signified, that the Note to which the Point was added, was to be lengthened or increased with half its own Value; for Example, if to the Note called a Breve, a Point was added, it was to be held out a Semi-breve longer; and so a Chroma with a Point obtained the Length of a Chroma, and of a Semi-chroma; and so of the rest. Under the Example of the above Signs or Marks of the different Time, in the same fifth Plate, are represented all the different Notes, which belong to each of the same Marks.

Monsieur *de Muris* changed also the Letters which *Guido Aretino* used to place at the Beginning of the Lines, whereon the Notes were written; and instead of them, he invented three Signs, or Characters, which were placed in like Manner at the Beginning of the five Lines. These were of three different Forms, as may be seen in the same fifth Plate, Example X.

One was called the Key of F, and was to serve for the Bass; the other the Key of C, which served for the middle and higher Voices; and the third was called the Key of G, and served for Instruments of the highest Sound.

The Key of F was differenced according to the two Lines whereon it was placed. If that Key appeared on the second Line from the uppermost, it served for the Bass; but if it was found on the middle Line, it served for the Bass called Baritono.

The Key of C served for four middle and acute Voices. The first on the second Line from the Top was the Key for the Tenor, which is the Voice next above the Baritono. If the same Key C was placed on the middle Line, it served for the Contralto or Counter-tenor, which is next above the Tenor. But, if it was placed in the fourth Line from the Top, it served for the second Soprano or Treble; and when placed on the last or lowest Line, for the first Soprano or Treble.

The third Key was called the Key of G, which was for the use of the most acute Instruments, and was placed on the fourth Line from the Top and the lowest Line.

Each of these Keys is distant from the next Key to it a Third; and all of them, except three, continue in Use to this Day.

The three that are in some Measure disused are the Key of F on the middle Line, called the Baritono; the Key of C on the lowest Line but one, for the second Treble; and the Key of G upon the last Line, for the Use of the most acute Kind of Instruments. These have

have been discarded; because the others, which are retained, are sufficient for the Purpose of common Music in four, five, and six Parts. But nevertheless in the more solemn Music of the Church, composed for two and more Chorusses, in eight and sixteen real Parts, they are all still made use of, and particularly for four Chorusses, where they are necessary for the commodious Distribution of the Parts.

In the above fifth Plate, under the Example X, are expressed the Marks of the Repeats, Directs, &c. of which there is no need to enter into a distinct Enumeration and Explanation in this Place, the Inspection of the Example, where they are clearly represented, being sufficient for the Information of every Reader.

After these Inventions of *John de Muris*, Music was daily improving, not only in Melody, but even in Harmony itself. And as divers Instruments, the best adapted to Music, were now more commonly used than they had been; namely Harpsichords, Viols, Violins, Tenors, and Bass-Violins, &c. and as these derived from the Voice the sweetest and most pathetic Melody, so on the other Hand, the Voices acquired from them, as being the most ready and easy in the Execution; the Diminutions of the different Notes, in Airs and other quick and lively Movements; insomuch that the Vocal Performers and Instrumental, striving to outdo each other, they have by Degrees arrived at that Perfection, which at this Day we have the Pleasure of hearing. The good Effect of this Emulation appears more eminently in Instrumental Performances. For Skill and Ability in Instrumental Music depends solely upon Genius, and Inclination assisted by Application, and intense Practice: But to excel in Vocal Music, besides a natural Genius for Music, there must be not only Practice and Application, but also an admirable Voice; which is very uncommon. And this we apprehend to be the Reason that in this Age we find so many more excellent Instrumental Performers, than we do Singers; which nevertheless is recompenced to us by Nature herself; since, generally speaking, a moderate Singer always pleases more, than the best Hand upon an Instrument, the Voice being the best Instrument because it is natural, and consequently more pleasant than any artificial one whatsoever.

Moreover Harmony itself gained considerable Advantages, by the Improvements in Melody. It was observed, that in the Dimunition of Notes, Sounds were found out, which contributed much to the pleasing of the Ear, and that many of those Dimunitions might be performed upon a simple Ground, not only in their proper Situation, but also out of it, and even reversed. For Example, it was perhaps observed that the seventh of the fifth Note of every Octave or Scale whatsoever, never failed to please whensoever it was properly introduced; and that not only when it was combined with the fundamental Note, or Ground in the Bass, but also with the first Natural, and simple Chords of the principal Note of the Scale; insomuch, that if they were reversed amongst themselves, and even if the fundamental Bass was transposed into the intermediate, or middle Sounds, they still afforded a perfect Harmony, by being resolved into the following Sound. This seventh Sound was therefore introduced; and from thence there sprung the Chords of the greater Fourth, the false Fifth, and the greater Sixth; the Chord of the perfect Fourth and Sixth; which proceeds from the perfect Chords of the principal Note of the Scale, having before been discovered by *Guido Aretino*.

From the aforesaid Seventh of the fifth fundamental Note, they passed afterwards to the Sevenths of the other Sounds of the natural Scale; which being first introduced into the Harmony, by the first simple Combination, which in the proper musical Term is called Preparation, were also found to be pleasing to the Ear, by passing into another simple Accord, called by Musicians, Resolution.

From the seventh they proceeded to the ninth Note of the principal Scale, or the Note next above the Octave of the same Principal: Though the Relation of the Ninth to the Ground Note, was not perfectly understood, because few Composers are practised in Writing in

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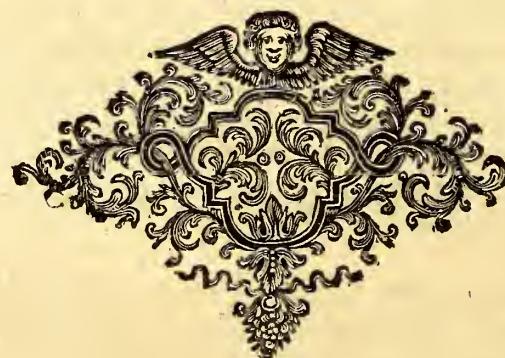
in eight or more real Parts, but only in four or five Parts; where the fundamental Ninth passes under another Denomination, almost continually; and consequently has a different Preparation and Resolution, because the Bass is not found in its true Place. Also finding by the Example of the fundamental Sevenths, that even the Ninths (though under the Name of a Second, false Fifth, or Seventh diminished) became harmonical and pleasing, they were admitted in Time into the harmonic Combination.

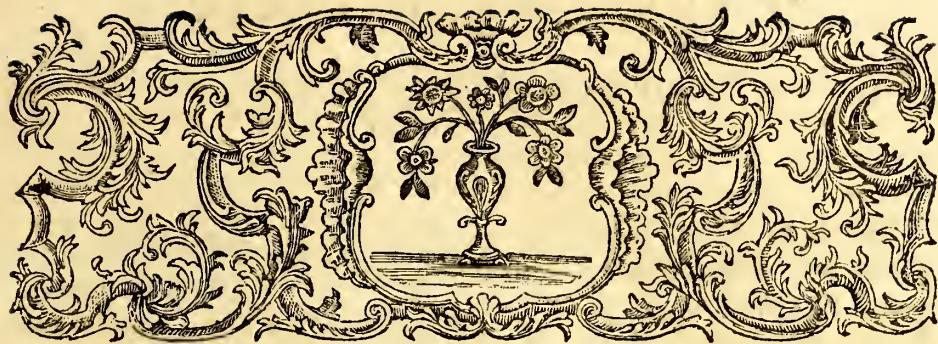
Now, by Means of these added Sounds, or Notes, which amongst Musicians go by the Name of Discords prepared and resolved, Musical Compositions became, as they are at this Day, the Subject of Study and Labour; there being composed Canons, Fugues, and Imitations, single and double, of different Subjects united together, which constitute the most agreeable Study, but require great Practice and Application.

From the Middle of the last Century to the present Time, the harmonic Art has arrived at its *Ne plus ultra*; and the Method of forming a Composition with an Union of all the Eight primary Sounds of any Scale whatsoever, hath been found out, and is practised in *Italy* in the grand and solemn Compositions for the Church for eight real Voices, doubled and tripled, in two distinct Chorusses, without Instruments, and for sixteen Parts also doubled and tripled, in four separate Chorusses, as used in the great Church of *Milan*, called the *Domo*.

The Rules for those Compositions will be made very clear and intelligible by Means of the Canons or Rules of the harmonic Code, in the second Book.

Thus we have given a short History of the Progress of Music, from the Time it was first introduced into *Greece* by their Poets, so far as we think necessary for the understanding of the different Terms, Modes, &c. gradually introduced and practised from thence unto the present Time; and to lead the Reader into the more ready Acquaintance with the ensuing Treatise on the Harmonic Art.





DELL'
ARTE ARMONICA:
OR,
A TREATISE of the Composition of MUSIC.

BOOK I.

Containing the general and particular Definitions and Divisions of the Whole HARMONIC ART, the Modern System of SOUNDS, with Two New Systems of COMBINATION of SOUNDS, and their Progression, formed by the AUTHOR.

To which are added,

All the SCALES arising from the above SYSTEMS.

C H A P. I.

The Definition of Music in general, and its Divisions.

A R T I C L E I.

HE Word MUSIC has been applied to many and various Subjects; but, in this Treatise, it signifies no more than a Succession of Sounds in themselves agreeable and properly expressed, which alone, or differently combined, in changing from low to high, or from slow to quick Movement, or *vice versa*, delights and gives Pleasure; consequently the Sounds are the Matter of Music; the Disposition of those Sounds, either alone, or combined in a pleasing Succession, is the Art and the End to affect the Passions with agreeable Sensations, which become more or less so, not only from the Degree of Perfection the Art is arrived at, but also from the different Constitutions and Habits of the Auditors, as remarked in the Introduction.

Of the Division of Music.

ARTICLE II.

WE shall first divide Music into Melody and Harmony, and this regards in general every Species of it. Afterwards we shall distinguish it into Vocal, Instrumental, and Local, from being used in the Church, Theatre, Chamber, &c. every one of these having some particular Rules, over and above the common Rules relative to Harmony, which particular Rules will be explained in the last Book.

Of Melody and its Division.

ARTICLE III.

EVERY Tone, Air, or Song, formed by Progression of different Sounds, but following alone one after another, or by two or more singing the same Sound, is called Melody. This may be divided into Natural and Artificial, but both are the Daughters of Nature.

The Natural is deprived of every Ornament, and is not subject to any Rules, being practised by People ignorant of Music.

The Artificial, on the contrary, is improved and adorned by the Harmonic Art, to which it is made a Companion, proceeding together by fixed Rules, excepting where Invention is concerned, which depends almost entirely upon Nature.

Of Harmony.

ARTICLE IV.

THE Antient Writers of Music, as many Moderns, call the different Ratios of the supposed Intervals of the Sounds, by the Word Harmony. So *Euclides* in his Introduction to the Harmonic Art; the same by *Gaudentius* the Philosopher, as by *Nicomacus* the Scholar of *Pythagoras*. *Ptolomy* defines the Harmony, a Knowledge of the Difference of the Sounds in regard to their Acuteness or Gravity: The same by *Zerlino* in his Institutions and Demonstrations Harmonic; also *Huygens* calls his Cyclo Harmonic in his *Cosmotheoros*, *Dechales*, *Cotas*, *Wallis*, *Malcombe*, and of late Mr. *Eular* in his *Tentatam Nove Theorie Musice*; so Dr. *Smith*, Head of *Trinity-College, Cambridge*, in his learned Book intitled, *The Harmonic*. All, and many others, have used the Word Harmony to be applied to the Ratios of the above supposed Interval betwixt the different Sounds. But in this Treatise, where the Sounds are not considered in the Ratios of their supposed Intervals, but only in the immediate Effect, which alone, or combined in their Progression, produce into the Sensation; we shall define, that Harmony is a Product of the Progression of two, three, or more different or dissonant Sounds (distinctly perceived by the Sensation) joined together and artificially combined. We say, a Progression of different and dissonant Sounds together combined, because a simple Combination of Sound, without Progression, cannot be called a compleat Harmony, being no more than a Beginning of Harmony, which signifies nothing, as a simple Word is not a Discourse, or an Oration, but only a Part.

Of the Division of Harmony.

ARTICLE V.

HARMONY must be divided into Fundamental and Figurate, both Daughters of the Art: The Fundamental is the only practical Theory of the Harmonic Art; it is distinguished

distinguished from all other Musical Compositions by the Name of fundamental Counterpoint, which is so called from Points, instead of Notes, being applied; and fundamental, because properly it is the Foundation of the Harmony; as the Bass Part, which is the lowest of all the other Parts, is also called fundamental, for being the Harmony regulated by its different Motions. By this fundamental Counterpoint are composed several Examples, which we call Canons, into and by which are described and explained all the Laws or Rules of the Harmonic Art, or of Composition of Music, all ordinarily joined in one Harmonic Code, which will be explained in the next Book.

The figurate Harmony is usually called by the Musicians the figurate Music, because it is formed with divers Figures, Movements, and Times, at Pleasure; but it is still subject to the Laws and Rules which will be laid down in the Harmonic Code of the fundamental Harmony. The figurate Harmony may be a Composition of two, three, four Parts, and as far as sixteen, and more real Parts joined together with Melody. The Explanation of this figurate Music, with its Divisions, and its Relations to the fundamental Harmony, will be made after we have digested the Harmonic Laws, or Rules, prescribed by the Harmonic Code, in the next Book.

C H A P II.

Of the Musical Sounds, their Definition, Number, and different Intervals.

The DEFINITION.

ARTICLE I.

IT belongs to Physic to define and explain the Nature of Sound in what Manner it is produced and propagated, and also what Bodies are most fit to produce it, and into how many Species it is to be divided, with the Properties of every one. But Musical Sounds, which are occasioned by the human Voice, or Instruments proper for Music, must be sweet and equal in all the Degree of Acuteness, or Gravity, and consequently pleasant in themselves; it being evident, that a bad, unequal, and ill-disposed Voice, like a bad Fiddle, or all other Instruments ill-tuned, or played, cannot afford any Pleasure, which is the very End and Design of Music.

Of the Number of Musical Sounds.

ARTICLE II.

THREE are no more than eight original Sounds in Music; but these Sounds may be transposed more acute, or more grave, still retaining the same Number and Order; and tho' the Intervals may be infinitely divided, so as to comprehend all possible Sound, yet the Octave of every Division will have a similar Sound, either grave or acute, and by Octaves may be multiplied at Pleasure, as was mentioned in the Introduction.

Of the different Intervals of the eight original Sounds.

ARTICLE III.

THE original eight Sounds proceed from the Grave to the Acute, and *vice versa*, by two different Intervals. It was taken Notice in the Introduction, that the Greeks distinguished

distinguished the Intervals of the Sounds of the first Diatonic System of the Tetrachord conjoined, by the Names of Tone Major, Tone Minor, and Semitone: Afterwards in their System called the greatest and unchangeable, they were obliged to divide the Interval of the Major Tone, between the Chords Mese and Parameſe (that is, A, B, in the modern System) in order to add a new Sound, which was called Trite Synemmenon (now called B flat) this new Sound was the first Note of the third Tetrachord, which was added conjoint to the two first; by this Addition was supposed, that the Intervals of the same third Tetrachord arose in the same Order as in the first and second, beginning with a Semitone: From the above Division has arisen the supposed Difference of the Semitone in Major and Minor, consisting of one Comma, *to wit*, the Major Semitone five Commas; and the Minor four; as from the Chord Mese, or A, to the added Chord Trite Synemmenon, or B flat, five Commas, and from the same Trite Synemmenon to Parameſe, or B natural, four Commas; so from Parameſe to the Chord Trite Diezeugmenon, or C, five Commas, consequently a Major Tone from Trite Synemmenon, to Trite Diezeugmenon, which Difference in Major and Minor was not considered by the Pythagoreans, nor by the Follower of Aristoxenus; the Pythagoreans considering all the Tones of the greatest System, as Major of nine Commas, and the Semitones all of four Commas, which makes the Pythagorean Lima, as has been told in the Introduction, and the Followers of Aristoxenus, by which were calculated the Tones in twelve Parts, and the Emitones, or Semitones, in six Parts, consequently all equal, and is more than probable, that the above Difference in Major and Minor Tones, and Semitones, was never considered in Practice. The above greatest, and unchangeable System, was divided into Semitones by Aristoxenus, which certainly is the best of the Greeks who have wrote in Musical Matters, and in that Manner he distinguished his fifteen Modes by the Diateſſaron, or perfect Fourth, which is formed by equal Semitones, as has been seen in his Diagrama, Example V. Plate I. mentioned in the Introduction. If these Semitones had been supposed not equal, the Diateſſarons, by which the same fifteen Modes were composed, should have been partly imperfect, being evident, that the Minor Tones being divided into two Minor Semitones, and the Major Tones in one Major, and one Minor Semitone, consequently some of the same Diateſſaron must be formed by different Semitones, in regard to their Latitude. But after the happy Invention of Harmony, and the great Progress which Music has made, particularly from the last Century to this Day, it is now evident, and clearly demonstrated by Experience (as will appear in the following Books) that the Division of the Tones and Semitones into Major and Minor, is inconsistent both with Melody and Harmony, and never subsisted, but only in the Imagination of the Authors, which followed the first Division of the old Greek System of the first four Strings of the Lyre, and successively of the seven Chords, called the conjoint Tetrachord, as has been done by Ptolomy, followed by Boetius, and by almost all the Authors which have treated of Music, till the present Time. But now in the present practical System of the Musical Sounds, all Sounds are divided by two Intervals, *to wit*, by equal Tones, and equal Semitones, these considered as an half Part of the Tone; and the Tones being all divided into Semitones for Sake of the Transposition of the two principal Scales, consequently the original eight Sounds are augmented to the Number of thirteen Sounds, divided by twelve Intervals of a Semitone each, as will appear in the following Chapter.

C H A P. III.

Of the new Modern and General System of Sounds, and of the Names of its different Intervals.

ARTICLE I.

This is called a general System, because it comprehends all other Systems, Scales, and Divisions; it is also called the new Modern System, to distinguish it from that of *Guido*, which was called the Modern System, but now is called the old Modern System of *Guido*: This new Modern System is expressed in Example I. Plate VI.

The first lowest Sound of this System is C, which might properly be called A, being the first Letter of the Alphabet, as the *Romans* have already done to the first Sound of the Greek System: But as this Alteration would have changed all the old Notes or Letters applied to these Sounds in the Time of *Boetius*, and afterwards restrained by Pope *Gregory* (as mentioned in the Introduction) it has not been made either by *Guido*, or in the present new System; only the Order is different, by beginning with the Sound named C, instead of the Sound named A, as the *Romans* have done, or with the Sound G, as *Guido*.

From the Principal and lowest Note named C; to the Sound D, its following Note, is an Interval of one Tone; also from D to E, is a like Interval; but from E to F, there is only a Semitone; from F to G, the fifth Sound, from G to A, the sixth, and from A to B, the Seventh, is an Interval of a Tone each; and from B to C the eighth Sound, which is the Octave of the first principal Grave Sound of the System, is the Distance of a Semitone. This System being formed of five Tones and two Semitones, as is expressed in the first Example, Plate VI. above-mentioned:

Of the various Names to the different Intervals of the above System.

ARTICLE II.

THE two Sounds, which are formed by the Interval of one Tone, is called a Major, or natural Second, as C,D. D,E. F,G. G,A. and A,B. as to E,F. and B,C. which are only distant a Semitone; this Interval is called a Minor Second; the Whole of the Octave being composed of five natural Seconds and two Minor, which is the same as five Tones and two Semitones, mentioned in the last Article: Two Semitones making a Tone; so two Minor Seconds make a natural or Major Second.

Two major Seconds following each other, as C, ¹D, ²E. make an Interval called the natural Sharp, or major Third C,^{3 Maj.}E.

The Flat or Minor Third, is formed of one second Major and one Minor, as Maj. ¹, ²Min. Min. ¹. ²Maj. Min. ³. Min. ³. D, E, F, or E, F, G, making the Flat Natural, or Minor Third D, F, or E, G, or others like.

The fourth Sound F, being distant from the Principal C, two Major Seconds and one Minor, or two Tones and one Semitone, is called the perfect Fourth, as being consonant with the Octave of the principal Note.

The Sharp or false Fourth, is composed of three Major Seconds, which is three Tones, as F to B, and are also called by Musicians, the Tritone.

Two Major Seconds, and two Minor, is the Interval called false or lesser Fifth, which is the same as two Tones and two Semitones, or as the Tritone, as from B ascending to F.

The Interval of three Major Seconds and one Minor, or three Tones and one Semitone, as from the principal Note C to the fifth Note G, or from D to A, whatsoever other Sounds of a like Interval is called the perfect Fifth, which is consonant with its grave Sound, as has been explained in the Introduction.

The Interval from C to A, which is the sixth Sound of the System, or other like Interval, being formed by four Major Seconds and one Minor, or four Tones and one Semitone, is called the Major Sixth.

The Minor Sixth is composed with three Major Seconds and two Minor, or three Tones and two Semitones, as from E to C ascending, or other like Interval.

The seventh Sound in this System is B, which being distant from the Principal C five Major Seconds and one Minor, or five Tones and one Semitone, therefore is called Major or sharp Seventh, as all other like Intervals.

It is called Minor Seventh, when formed by four Major Seconds and two Minor, or four Tones and two Semitones, as from D ascending to the C acute, or from the fifth Note G to F, above the Octave, or other like Interval.

The last Sound of this System is the Eighth, which is called the Octave, and is the principal perfect Consonant after the Unison; it is composed by five Major Seconds and two Minor, or five Tones and two Semitones. All the abovesaid Intervals are within the Compass of the Octave.

But there are some larger Intervals, which passes the Limits of the Octave; the first Two are called the Major and Minor Ninth; the Major is composed of six Major Seconds and two Minor, or six Tones and two Semitones, as from D grave to E acute in the superior Octave; the Minor is composed with five Major Seconds and three Minor, or five Tones and three Semitones, as from E grave to F acute of the second Octave.

The other superior Intervals of the following superior Octave, as the tenth, the eleventh, twelfth, thirteenth, fourteenth, and fifteenth, are considered as being the Repetition of the third, fourth, fifth, sixth, seventh, and eighth; and sometime both Ninths are considered as Seconds in the Compositions of Figurate Music; but in the fundamental Harmony they are calculated at these proper Distances of ninth, tenth, eleventh, &c. and is only for the greater Facility of putting the simple Figures of the Sounds belonging to the first Octave, instead of the double Ones.

First N.B. Besides the above explained Intervals, there are some others, as the second superfluous or extreme Sharp; the superfluous Fifth, Sixth, and Octave; also the Seventh diminished, which not being concerned in the fundamental Harmony, will be explained in the last Book of the figurate Harmony, being all these Sort of Combinations inverted of the fundamental.

Second N.B. The false Fifth before-mentioned, is the same Interval as the false Fourth; the Difference is only for the Sake of the Names. B, in ascending to F, must pass C,D,E. which in all are five primary Sounds, namely B,C,D,E,F. which are the proper assigned Names to their respective Sounds; and from F ascending to B, are only four primary Sounds,

Sounds, with these proper Names, F, G, A, B; one is called false Fifth, being a Semitone lesser than the perfect Fifth; and the other is called false, or Major Fourth, being composed of one Semitone more than the perfect Fourth; but both the said Sounds are in the same Distance of six Semitones, or three Tones, which is the same, as it is evident, consequently the Sounds, being in the same Interval, the Difference is only in being transposed, the Grave in Acute, or *vice versa*; but their Progression is always the same, ascending one, and descending the other,

Third N.B. All the above Intervals must be distinguished into consonant and dissonant: The Consonant are all the Unisons, Octaves, and perfect Fifths, as has been explained by Experience, in the Introduction, and all the other Intervals, as second, third, fourth, false fifth, sixth, seventh, Major and Minor, are dissonant, consequently cannot be called consonant, but only Harmonic; the First as consonant, being considered as one Sound, cannot be called Harmonic, but only Melodic, and the dissonant, so called, being distinctly perceived by the Ears, when joined with the Consonant, made Harmonic the same Consonant, as will clearly be explained in the Fifth Chapter of the Harmonic System.

Fourth N.B. The abovesaid dissonant, or Harmonic Sounds, must be considered distinctly, as Major, or sharp, and Minor, or flat, being their natural Progression different, the Major ascending, and the Minor descending; but this Rule is altered on divers Occasions, as will appear by the Canons in the next Book.

C H A P. IV.

Of the Consonant Division of the System of Sounds, from which arises the Consonant System of Progression, or Modulation.

A R T I C L E I.

IT was defined in the first Chapter, Article IV. that Harmony consists in a Progression of dissimilar and dissonant Sounds combined together. These dissimilar and dissonant Sounds are distinguished into Lowest, Low, Middle, Acute, and very Acute. The lowest Sound, which now becomes the Subject of this Article, is called the fundamental Bass, which is always supposed to be lower by one Octave, than the common Bass of the figurate Harmony; and by being sounded so low, can only proceed by large and proportionate Intervals: Experience shews, that the Trumpets and *French-borns*, in the lowest Notes, can only proceed by Fifths or Fourths, whereas in the high Notes they may proceed not only by Tones, but also by Semitones; the same must be supposed in the fundamental Bass: Its most natural Progression is to rise or fall a Fifth, or a Fourth, which produce the same; rising a Fifth, is the same as falling a Fourth, and rising a Fourth, is the same as falling a Fifth, as will be demonstrated in its proper Place, with Examples.

These two Movements, of Fifth descending, and of Fifth ascending, arise from the consonant Division of the general System of Sounds, by Means of the two middle Sounds, which divide the System in two equal Parts, as in Example II. Plate VI. namely, C, principal Sound to F, middle Sound; and G, also middle Sound to C Acute, the Octave of the

Principal being both Parts composed of two Tones in the Grave, C, D, E, and a Semitone in Acute, E, F; also G, A, B, two Tones, and B, C, the Acute Semitone, making every one of the two said Parts an Interval of a perfect Fourth; and G Basis of the

the Acute Fourth, forming the perfect consonant Fifth to C principal Basis of the first Part; so C the Octave, at the Top of the second Part, makes the consonant Fifth to F middle Sound, at the Top of the first Part, or Division.

From this Division arises our two fundamental Systems, General and Natural; the general passing through all the Semitones of the Scales of Transposition, and the natural through the eight original Sounds of the natural Scale. These two Systems of Progression are also called Consonant Systems, being formed by the two Consonant Fifths ascending and descending, or by the Fourths, which are the Inversion as before mentioned.

The first of the above two Systems which is described in Plate VII. is called general, because proceeding in its Course continually by perfect Fifths, it divides the Octave in all the Musical Sounds which serve to Harmony, being thirteen Sounds, divided by twelve supposed Intervals. The other, which is also described in Plate VIII. is called the natural, because its Progression proceeds only on the eight Primary Sounds of the natural Scale, and in that Progression must be used one false Fifth, as will be explained in its proper Place.

The abovesaid four Notes, from which arises their Thirds naturally sharp, are distinguished from the rest of the Notes of the Octave, and commonly called the four principal Notes thereof; but in Reality only the first Note and the fifth are the two principal and fundamental Notes, because the first principal Grave Sound C, is the Producer of all the Sounds, in its Octave, and the fifth Sound G is the only Consonant to the principal C, and the same G becomes the necessary Guide of the Harmony in the Progression, so, as by proceeding only by Skips of Fifths above or below, the Harmony passes successively, not only the Primary Sounds of the natural Scale, but also these divided by Semitones, as before said, as will be demonstrated in its proper Place.

The said fifth Sound of the Octave is called the fandamental Guide, because after having introduced the Combinations of Sounds into the different Tones and Semitones of the Scale, it restores the same Sounds, and their Combinations, to the first principal Note of the Scale. But in regard to the Interval of the second Fifth, between the other two Notes, F and C, the first Note F indeed is consonant with the Octave C Acute, which is its Fifth, but it is not consonant with the Consonant Grave C, being only distant an Interval of a Fourth, which Experience shews, that it is not consonant, but dissonant, and consequently only Harmonic, as explained before. The Octave indeed is considered in Harmony as the same Sound of the principal; and this Reason may affect both the fourth and the fifth, because they are neither of them consonant with both the Extremes of the Octave, but as the fifth C is consonant with C Grave the Principal, and the Octave C Acute is absorbed by the same Grave Sound C, being evident (as has been demonstrated by Experience in the Introduction) that the Grave Sound absorbs all its Acute Consonant Sounds, consequently the Distance, or Interval of one Fourth from G to C Acute, subsisting, the Grave Sound C is not perceived, and for the same Reason the Consonant Fifth between F and the Octave C Acute, subsisting, its principal C Grave is not perceived, but only the Interval of one Fourth, which is not consonant: For this Reason only the Fifth is the Consonant Sound with its Grave and Principal.

These two principal and fundamental Sounds, the Principal and its Fifth, must be considered as the original and first Foundation of all the Combinations and Progressions of the Sounds in their own Scale; and may both be used in Melody and Harmony, without changing their Place, as it is used by the Bagpipe, which keeps continually playing the principal Note, as the Foundation of Melody; and the consonant Fifth, which is the fundamental Guide of the Sounds of its own Scale, may also continually serve for a stable Foundation under all Combinations and Progressions which can be formed in its Scale; as is commonly used in Cadences, particularly in Church-Music, in the last and final Cadence, when the Pedal of the Organ being used upon that Occasion, which

is played with the Foot in one of the lowest fundamental fifth Sounds of the Organ, it is always kept firm under the Harmonic Progression of the Subject Melody, or Fugue, proposed in the Beginning, and repeated, as Epilogue, before the final Cadence, with both the Hands employed in the Harmonic Combinations and Progressions of the said Subject, till at last it resolves into the Cadence. Therefore the above two Sounds, Principle and Guide, are called the two original, and stable, or immovable fundamental Sounds, being distinguished by this Name from the other two fundamental Basses deriving from the Motion of the fifth high and low, which Basses are called the fundamental Basses of the Progression of Harmony.

The two first immovable, and the two last moveable Basses, are called fundamental. The two first continually sounding the same Note, without any Regard to the Progression, and Combination of the superior Parts in the Course of the Octave: On the contrary, the other two follows the Harmony, conforming to the Rules of the fundamental Progression; therefore these two last Basses are the principal Object of this present System of Progression, or Modulation.

The two first Intervals in the superior Division of Example II. Plate VI. the first from the extreme Grave Sound C, to its fifth G, and middle Sound of the System; and from F, also middle Sound to C extreme Acute, both being of a perfect Fifth ascending, we call them the indeterminate imperfect Skips consonant of the Guide, namely, from the Principal, or from a Guide to another Guide, it is called indeterminate, because by these Skips the Harmony cannot be terminated, except in some Instances, for the Sake of Expression; and it is also called imperfect, because from these Skips arise all the imperfect Irregulars, and suspended Cadences, with other Imperfections, which will be demonstrated in the next Book. On the contrary, the other two Skips, as in the under Division of the same Example II. Plate VI. from C above, to F below middle Sound, and from G also middle Sound, to C Grave below, both descending with a perfect Fifth: These, and all other of the same Kind, we call them the terminative, perfect, consonant Skips of Cadences, that is from the Guide to the Principal, because from these Sort of Skips arise all perfect, middle, and final Cadences, by which the Harmony is terminated, and it is called perfect, because it may be joined with the following Thirds to the Fifth; namely, the Seven and Nine, as will be explained in the next Book: But it must be distinguished, that when the Combination of the last Note is compounded, the Cadence is not terminated, because those abovesaid superior Third, which must be prepared in the antecedent Combination, wanted after to be resolved, and for that Reason the last Note of the perfect terminative Cadence, must be of simple Harmony, and not at all compounded by higher Thirds than the two which compose the Fifth, as will be demonstrated in the next Book.

First N.B. The fundamental Bass, proceeding by the imperfect consonant Skips of Guide, rises continually, passing through all the Sounds of the Octave; on the contrary, with the perfect consonant Skip of Cadence, it falls continually, passing also all the Sounds of the Octave, as it is delineated in Example III. Plate VI.

Second N.B. It must be remembered, that when the Bass ascends a Fifth, it is the same as descending a Fourth; also descending a Fifth, is the same as ascending a Fourth, as before-mentioned; the same is ascending a Third as descending a Sixth, and descending a Third, as ascending a Sixth, as in Example IV. Plate VI.

Of two Harmonic Movements added to the two Consonant.

ARTICLE II.

TO the above two consonant Movements, have been added two other Harmonic Movements, *viz.* of a Third low, and the other of a Third high: These two Movements, or Skips, are not absolutely fundamental, the first of Third low deriving

from the perfect consonant Skip of Cadence, and the other of a Third high; from the imperfect Skip consonant of Guide, both serving as Auxiliaries to the other two fundamental; therefore we call the first descending a Third, the perfect auxiliar Harmonic Skip of a Third low; and the other ascending a Third high, the imperfect auxiliar Harmonic Skip of a Third high; they are both called Harmonic, being derived from the Motion of the Third, which is Harmonic, and not consonant, as will appear in the next Chapter: but the first Skip of a Third low is distinguished by the Term perfect, as deriving from the perfect Consonant Skip of Cadence, partaking of its Perfection. The other, on the contrary, is called imperfect, deriving from the imperfect consonant Skip of Guide, and also partaking of its Imperfections, as will clearly be demonstrated in the next Book.

With the two consonant Skips, and their two Auxiliars, the fundamental Bass is able to perform all possible Harmonic Progression; therefore we call it the true fundamental System of the said Harmonic Progression.

Of the Division of the fundamental Progression arising from the above System.

ARTICLE III.

THE different Scales which arise from the seven Primary Sounds, excluding the Octave, as a Repetition of the first Sound, were distinguished by some Greeks, and by all the old Romans, as also by Guido and his Followers, in seven Species, which is the same as to say seven Octaves: The Difference of the seven Species was made by the different Situation of the Semitones, without any other Distinction; and the passing from one Species to another, was called Modulation, as the Greeks have called the passing from a Mode to another. This Word Modulation has continued, and still is continued by Musicians; but in this Treatise it is called by the common Name Progression, which signifies in Melody the moving from one Sound to another, and in Harmony, from many divers Sounds combined, to another different Combination, proceeding from one Place to another, in transposing the Scales, which Term Progression may be easily understood by all Sorts of People; with this Progression is formed all Sorts of Music.

This Progression is made in two different Manners, therefore we shall distinguish them in natural or simple, and in mix'd or varied; the natural or simple Progression, is only formed in the natural Scale, passing through its relative, and subordinate Scales, without changing the original Primary Sounds; and this Progression arises from the above-mentioned natural System of Progression, as from the general System of Progression arise the Progression which we call mix'd or varied, because it transposes the Scales in every one of the Semitones, which divides the Primary Sounds, and by this Transposition is changed and altered the first Order of the Sounds, as will be clearly explained in the Articles of the particular different Scales.

First N.B. The general System of Progression before-mentioned, is formed by thirteen Scales, every one of which proceed by perfect Fifths descending or ascending; and in this Manner all the said Scales are divided into thirteen Sounds by twelve Intervals of an equal Semitone, by the Progression of a perfect Fifth, and all the Sounds of a different Denomination formed by the two Motions of the Fifth, are distinguished as is clearly expressed in Plate VII.

Second N.B. The other natural System of Progression is formed by eight Scales, which serves to every one of the primary and original Sounds, all proceeding also by Fifths ascending and descending; but because between the eight Primary Sounds, two of the same are only in Distance of a Semitone, when the others are of a full Tone, as has been seen in the general System of Sounds; therefore, when the fundamental Bass moves from the second Semitone B, cannot proceed with a perfect Fifth, which in ascending is F sharp, which Note or Sound is not in the natural Scale, consequently must necessarily proceed

proceed with a false Fifth to F natural. The same in descending with the same Motion of a perfect Fifth, the Bass must also necessarily proceed with a false Fifth from the Note F to B natural.

Third N. B. The above said false Fifth is supported in descending by the perfect Skip of Cadence, but not in ascending with the imperfect Skip consonant of Guide, for the Reasons which will be demonstrated in the next Book.

Fourth N. B. The above Division of the Progression explained in this present Article, is one of the principal and necessary Notions for more easy attaining the compleat Knowledge of the whole Art.

C H A P. V.

Of the Harmonic Division of the System of Sounds, from whence arises the Harmonic System of Combination of Sounds, with its particular Divisions.

A R T I C L E I.

THE Terms of Consonant and Harmonic were always used as synonymous. The Thirds and Sixths, the Fifths and Octaves, have been, and at this very Time are, reciprocally called Consonant or Harmonic; only with the Distinction of calling the Thirds and Sixths imperfect Consonant, not in regard to the Degree of Consonance, but because they may be altered into Major and Minor; and the Fifths and Octaves perfect consonant, because they cannot be altered. It seems very clear, that the Term Consonant signifies two Sounds, which resemble each other, and being sounded together, can scarcely be distinguished, as it is demonstrated by Experience, in the Introduction: For which Reason a Progression made with a Combination of two Octaves, or two Fifths following each other in a Composition of two, or three Parts, are justly forbidden in Practice, because they are considered as simple Sounds, without Harmony.

Harmony must be considered as the Union or Combination of dissonant Sounds, which Word Dissonant signifies, that there is heard two distinct Sounds, as abovesaid, or, in vulgar Terms, a Combination of dissonant Sounds, distinguishable by the Ear, as has been defined in the fourth Article of the first Chapter, for which Reason the simple Fifths and Octaves cannot be Harmonic, particularly the Octaves, which being the more perfect consonant, is always absorb'd and confounded with its Grave Sound; and, on the contrary, the other Intervals cannot be consonant, as mentioned in the antecedent Chapters; but the Fifth, when divided into two Parts by a middle Sound, it becomes Harmonic, being distinguished in and by two successive Thirds, consequently if all the Sounds which compose their general System, were disposed in successive Thirds, all the same Sounds would become consonant and Harmonic, respectively from one Fifth to another; and in this Manner will be formed an Harmonic System disposed, as in Example VII. Plate IX.

But of all these Thirds, Experience shews, that only the first Third, which divides the fifth Sound from the Principal in two Thirds, is properly the original and essential Harmonic Sound; essential, because it divides the perfect Fifth, which is consonant, in two Thirds, consequently the Fifth becomes also Harmonic, as mentioned before, and original, because the first Third is the Root of the following other Thirds, and because an Air, Song, or Tune, may be composed for two Voices, or Instruments, with only Thirds

Thirds, or Sixths, as is known by Practice; to which two Parts may be added a proper Bass, which together, or without the Bass, will make an agreeable Harmony, and give great Pleasure to the Ear; which is not possible to be done with only the Combination of Fifths, and Octaves; and because the fundamental Bass is always joined with its consonant Fifth, which Fifth, when it is divided by the Third, making two Thirds, one Major, and one Minor, and being added to the Octave of the Principal, Fifth, and Third, in this Combination are composed all the Primary Sounds Harmonic, with the two consonant; namely, the two Thirds Major and Minor, by which is formed the Fifth and the Fourth, from the Fifth to the Octave; also the two Sixths, Major and Minor, the Major between the fifth G, and the Octave of the first third E; and the Minor between the same third E, and the Octave of the principal C. This Combination, which is the Root of all Combinations compound, and full, make one simple Accord, by which may be made a Counterpoint fundamental in six real Parts, and in figurate Music in eight Parts, by only the Inversion of this simple fundamental Accord, which Composition will be agreeable, without the Combination of any superior Thirds, as Seventh, Ninth, &c. by Musicians called Falses, or Discords. And so far as regards the Combination of the above superior Thirds, Experience shews, that they cannot be added abruptly, being not agreeable to the Ear, for being so distant from their principal and fundamental Ground; but when introduced by the simple Accord fundamental, which is, as before told, their very Origin, or, in the Musician's Term, well prepared, will much improve and augment the Pleasure thereof.

From the above Reasons it is manifest, that the natural Harmonic System of the Combination of Sounds, arises only from the Harmonic Division of the general System of the same Sounds into successive Thirds, which being composed of the eight natural and original Primary Sounds, consequently produces eight Harmonic Scales disposed, as in Plate ~~VIII~~9 Example VII.

From the Order of the Division in the above Example, it is apparent, that this System produces three Major Thirds, and four Minor, which are not only Harmonic one with another, but also consonant at the same Time with their Fifth below, and above. The first Third of the general System of Sounds, is the Note E, which is Harmonic with C, the Principal, and with G, the fifth Sound of the general System, and is consonant with B, the seventh Sound, B being its perfect Fifth.

The second Third G is consonant with its Principal, and with D its Fifth above, and Harmonic with E below, and B above.

B, the third Third, and the seventh Sound of the Octave, is Harmonic with G below, and D above, and is consonant with E, its Fifth below, but is not consonant with F above, it being a false Fifth, composed of six Semitones, therefore is dissonant and only Harmonic.

D, the fourth Third in the first Harmonic Scale, is Harmonic with B and F, and consonant with G below, and A above.

F, the fifth Third, is consonant with C above, Octave of the Principal, but not with B, its Fifth below, which is false, as abovesaid, consequently it is only Harmonic; and it is also Harmonic with D and A, its Third below and above.

The last third A of the same first Harmonic Scale, is consonant with D below, and E above; and Harmonic with C and F, its Thirds above and below.

As the fundamental Bass in all its Progressions, must be joined with its two consonant Sounds, the Fifth, and Octave, to which it is necessary to add the Third, without which

which the Accord, or Combination, is only consonant, and not Harmonic, as before explained; therefore all the Art of combining the Sounds, consists in keeping firm, one, two and three Sounds, which composes the original, simple Combination, in the antecedent Combination simple, or compound, that may be, which Sound, by the succeeding Motion of the fundamental Bass, are changed into the superior Thirds (called false by the Musicians) and afterwards in the subsequent Motions of the same Bass, they must be again introduced by a proper Resolution into one of the three Sounds of the simple Accord, with the Third, Fifth, or Octave. This is all which may serve for a general Solution of the Mystery of the Combination of Sounds, so confounded, and intricate, as commonly it is supposed to be.

The Method and Order of all the possible Combinations of Sounds, in every possible Progression, will be demonstrated by the Canons of the Harmonic Code, in the next Book, and clearly explained with all their different Distinctions and Exceptions.

Of the Division of the Combination of Sounds.

ARTICLE II.

THE Combination of Sounds is an Agreement of three, four, five, or more Sounds altogether, disposed in the Order of the Harmonic System, as third, fifth, seventh, ninth, &c.

It is divided into three different Kinds of Combination, which we call the first simple, the second compound, and the last the full Combination: This Division is also necessary for attaining the Knowledge of the Harmonic Art.

The simple Combination is composed of the first and second Third, which makes the perfect Fifth to the fundamental Bass, in whatsoever Scale, as in the Disposition of the Harmonic System, and with or without the Octaves, and the double Notes, it is called common Chord, or perfect Accord, by Musicians.

The compound Combination is made by adding one, or two, of the superior Thirds to the two first; as the seventh and ninth, or the eleventh and thirteenth; which two last are commonly marked fourth and sixth, for the Facility of using the simple Figures, instead of the double ones.

The full Combination is so call'd, when to the above compound Combination are added one or two Thirds more, so as to be united to all the superior Thirds, which compose the Harmonic Scale.

The respective Thirds, which compose the Compound, or full Combination, are marked with Figures under, or over, the Bass Notes, as may be seen in some Canons in the next Book, and in some Examples in the last Book. These Figures denote the divers superior Thirds concerned in the Combination to the Bass Note; for Example, the first Third above the Fifth, being the seventh Sound, is marked with a 7, the following third Note with a 9; but the other superior Thirds to the ninth, which are the eleventh and thirteenth, are marked thus, 4th and 6th, for the Facility of the simple Figures, as mentioned before.

The simple Combination has no Occasion for Figures, having no superior Third to the first two, which compose the Fifth.

These superior Thirds which compose the Compound, and full Harmony, cannot subsist in the Beginning, or in the first Combination of the Composition, which must be

simple, with only the Third, Fifth, and Octave, this Combination being the Productor of the following compound Accord, as before told ; and the same simple Combination must be adapted in the same Beginning to the principal Note of the Scale, in which the Composition of the Music is composed, except by some Accident, for the Sake of some particular Expression, by which the Composer may be obliged to begin the Composition with the compound Combination of the fundamental Guide of the chosen Scale, and ordinarily and particularly in the Composition of Recitatives and Airs of a pathetic Nature, and grave Time ; in which Sort of Combination, the principal Note of the Bass is almost always omitted, and its compound Accord is supposed prepared by the supposed antecedent Accord, notwithstanding it is not expressed ; but this happens very seldom, and almost never in gay Movements. Neither can the same superior Thirds subsist in the final, perfect Cadences, where, in two or three Parts, the same final Cadence must be only in Consonance, namely, with only the Octaves, and in four Parts may be joined the fifth ; in five or more Parts the said Cadences may be Harmonic, namely, with the Addition of the third, because in five Parts the fundamental Sound, and its Fifth, becomes doubled by their Octaves ; so the third Sound, which is the first Harmonic, and consequently the more sensible, being not doubled, cannot opprime the consonant Sounds, when they are doubled.

This must be observed, that when the Scale is with the Major Third, this same sharp Third must not be in the extreme Part acute of the Combination, but in the Middle, or near the Middle, all sharp dissonants being the most sensible. For the above Reasons, the simple Combination may be called the terminative Accord, and the compound, or full Combination, which properly belongs to the fifth Note of every Scale, being its fundamental Guide, must be called the indeterminate Accord, or Combination, because the compound, or full Combination, necessarily requires a subsequent Combination for its Resolution into the perfect simple Combination, in which only the Harmony may be terminated.

C H A P. VI.

Of the different Scales, their different Use, and their Distinction.

A R T I C L E I.

HE RE are many Scales arising from the general System of Sounds, belonging to **T** Harmony, and also to Melody ; but only one is the Principal, which is the true Copy of the very same general System, and it is the Spring of all other Scales, Divisions, and other Systems ; therefore it is called the Principal Scale, and it is also called the Natural Scale, as being derived properly from Nature, being analogous to the human Voice, and to Sensation, which Voice cannot naturally and easily ascend, or descend all the Degree of the Scale, without mixing the Tones with Semitones ; and if any Person will try to ascend or descend by successive equal full Tones, he will find it very difficult ; and our Sensations take no Notice of any Sound of a lesser Interval than of a Semitone ; consequently this principal Scale is in its proper and most natural Order, rising from the lowest to the highest Sound, and descending without any accidental ~~Note~~, either flat, or sharp ; its Sound, and their Names, being unalterable.

To the above principal, and natural Scale, another Scale different may be joined also as Principal ; and is called the Scale of the minor Mode, or of the flat Third by Musicians : This Scale has hitherto been known but imperfectly, the Order of their Sounds being considered not different from the Order of ours subordinate, and relative Scales to the Principal, and it is not a long Time it has been accommodated as a principal one, by the Practice of the Musicians ; for this Reason, and to distinguish it more properly from the other

other principal natural Scale, it is called in this Treatise the Artificial Scale: The Difference of these two principal Scales will be explained in their respective Articles.

Besides the above two principal Scales, there are two more, which may be considered as principal; these two Scales arise from the consonant Division of the general System of Sounds explained in the antecedent fourth Chapter; namely one from the Progression of the consonant fifth ascending, as F to C, G to D, &c. and the other from the consonant fifth descending, as from G to C, C to F; F to B flat, &c. from whence arises the Division of the natural Scale in thirteen Sounds, divided by twelve Intervals, each of one Semitone, but in two different Manners, by which are formed the two Scales, one ascending and the other descending; but the Diversity of these two Scales relates only to the Denomination of the Sounds themselves, which are the same under different Names; consequently the two Scales may be considered as only one, called by Musicians the Scale of Semitones; the Use of which is for transposing the natural and artificial Scales higher or lower, as will be explained in their different Articles.

From the other two Scales, the natural and the artificial, arises their proper relative and subordinate Scales, and from the other two of Transposition, their different transposed Scales, which Scales will be explained all successively.

Besides the above Scales, there are many others, which serve only for the Melody of the Parts, as is shewn in the last Article but one, belonging to this Chapter, and delineated in Example XVII. Plate XVI.

Of the Principal Natural Scale.

ARTICLE II.

THIS Scale, which, as has been said, is the very Copy of the General System of Sounds, and the Mother Scale, is composed of a Major Second from C to D; of a Major Third from C to E; of a perfect Fourth from C to F; of a perfect Fifth from C to G; of a Major Sixth to A; a Major Seventh to B; and from the same C to C Acute, an Octave, as has been explained in the General System of Sounds. But as the fundamental Bass, with its different Movements, may pass through all the eight Sounds of the Scale; therefore every Sound must have its proper Scale disposed into an Octave, to distribute to the different Motions of the same fundamental Bass, its proper and respectively different Combinations.

These Scales are formed with the same Sounds of their principal Scale, natural or transposed, as may be; and as the principal natural Scale is formed by eight Sounds, therefore there arises eight Scales, seven of which are the relative Scales, and subordinate to the first principal Scale, as in Example VIII. Plate X. namely, the Scales of D, E F, G, A, B, and C Acute; this last having its Sounds in the same Order as the Principal, is considered as a Repetition of its first Principal; but, on some Occasions, must be also considered as relative, as will be explained in its proper Place; the other six are the proper Relatives, having their Sounds disposed in different Order of the first Principal, as it is in the above-mentioned Example VIII. Plate X.

Of the Relative Scales arising from the Natural Scale, and of their respective Order to the same.

ARTICLE III.

THE first Scale in the above Example VIII. Plate X. is the principal Scale natural, which has its Sounds disposed, as has been explained in the antecedent Articles.

The

The following second Scale is the Scale of D, which is the first Relative, and has the Fourth and Fifth both perfect, but differs from the Principal in the first Third, and Seventh, both Minor.

The third Scale E, has also the Fourth and Fifth perfect, but the first Second is Minor, and consequently its first Third Minor, as also the Sixth and Seventh both Minor.

The fourth Scale F, is only different from the Principal in the fourth Note B, which is a false Fourth.

The fifth Scale G, is the same as the Principal, except the seventh, which is Minor.

The sixth Scale A, has the Fourth and Fifth perfect, but the Third, Sixth, and Seventh, are Minor.

The seventh, which is the Scale of B, has its Fifth false, and differs from the Principal in its Second, Third, Sixth, and Seventh, being all Minor.

The eighth Scale is the same as its Principal, being its Acute Echo, but may be considered as relative on some Occasions, as below will be explained.

The above six Scales, D, E, F, G, A, B, not only differ from the Principal, but also from each other.

The two Scales of E and B are the most imperfect, E being deprived of its proper Guide, which should have been B, if it might have its Fifth perfect, which is false, as mentioned; and B cannot be properly a relative principal Sound, for the same Reason of being deprived of its own perfect Fifth: Therefore these two Scales cannot subsist in natural Progression, but with some Limitations, as will appear in the next Book.

First N. B. It was mentioned, that the two extreme Sounds of the Consonant Division of the general natural System of Sounds, C, C, and the two middle, F, G, are commonly considered as the four principal Sounds of the Octave, following the first Opinion of Pythagoras, which after accidentally hearing the Harmonic Noise of the above four Sounds expressed by four Hammers, as is asserted by the common vulgar History; and after weighing the four Hammers, and making many Experiments with hanged and stretched Strings, he fixed the Ratios of the Intervals, which he supposed to be betwixt the Sounds of the above Quadruple, for exemplifying to the human Understanding the Difference between the Gravity and Acuteness of the Musical Sounds.

But of the above four Sounds are only two which properly may be considered as principal, in Point of Progression (as mentioned in Chap. IV. Article I.) C Acute, is only the Repetition of the principal Grave C, and the fourth Sound F has its fourth Sound imperfect, and false in B, therefore the Harmony cannot proceed in the natural Scale with the perfect Consonant Skip of Cadence, from the same F to B, without Preparation, but only from F to C Acute, with the Consonant imperfect Skip of Guide, being the Acute C, its perfect Fifth. But G, the fifth Sound of the Scale, being the perfect Fifth of the principal C Grave, the Octave of which makes its perfect Fourth above, and the same G falling directly into the principal C, with the Consonant perfect Skip of Cadence, must be considered as the only fundamental Guide of the Scale, having, in its fundamental Combination, the two Harmonic indicative Notes, the Major Third, and the Minor Seventh (as before told) the other Consonant perfect Skips, which happen in the Progression of the Harmony in the same natural Scale, as D A, or E B, and A E, can only serve as relative or subordinate Guides.

C, the Octave of the Principal, (as before mentioned) may become, in the Progression of

of Harmony; the Guide to F, into which it falls directly, as G to C principal, but because F cannot be a principal Sound of the Scale, having the false fourth B, and C Acute, as Guide, is deprived of its indicative Minor Seventh; consequently serves only for a relative Guide to F, and F only is subprincipal relative in the natural, or simple Progression.

By considering the two indicative Notes, all the Sounds are easily distinguished from their principal Sound of the Scale, and from their fundamental Guide.

G, the fundamental Guide, is not different in its Scale from the principal C, only in the seventh Note, which is Minor, deriving from the perfect Fourth of the Scale; and this seventh Note must be Minor, which is a necessary Condition appertaining to all fundamental Guides, and may also be called the fundamental Seventh, to distinguish them from the Sevenths of the relative Guides.

The third of every fundamental Guide, which is B in the natural Scale, and naturally sharp, which must be always sharp in all the fundamental Guides of the different principal Scales, may also be called fundamental Thirds.

The above two Notes, the Third Major, and Minor Seventh, of the fundamental Guides, being the Notes which indicate the approaching of the principal Note of the Scale, may also be called the Harmonic, fundamental, indicative Notes; namely, Major Third Indicative ascending, and the Minor Seventh descending Indicative. The Indicative ascending serves to both the natural and artificial Scales, and their transposed Scales; and the Indicative ^{descending} serves only to the natural Scale, and its transposed Scales, for to distinguish them from the artificial, and its transposed Scales (as more clearly will be explained in the following Article of the Scale artificial.)

The Major Third ascending, goes directly to the principal Sound of the Scale, and the Indicative Seventh Minor descends directly to the Major Third of the Principal, each of them proceeding by Semitones, which is the shortest Way, and consequently the most natural, both Notes leading into the first simple Combination of the principal Note of the Scale, with a contrary Motion.

The false Fifth between the Major Third, and Minor Seventh, may also be called the Harmonic Indicative Minor Fifth; and the two Notes being inverted, becomes the Indicative Harmonic Major Fourth.

Second N.B. It was mentioned at the Beginning of the first Article of this Chapter, that the natural Scale is the Spring, or the very Mother of all Sorts of Systems, or Scales, that may be formed with the Musical Sounds; and we have seen first arising the Scales relative, and the artificial Scale; also the Scales of Transposition. Now we shall see that the System of Combination of Sounds arises also from the same Mother Scale.

The natural Scale, which makes with its Scales relative a perfect Quadrat, as appears in Example VIII. Plate X. forms the Harmonic Scale with the Diagonal, which descends from the first Sound C, to the last C in the opposite Angle; from the first C it passes to the first harmonic third E, from the third to the second G, which is the fifth of the first principal, from G it passes to B, the third Third of the Harmonic Scale, and seventh of the first Principal; from B it passes to D, which is the fourth Third of the same Harmonic Scale, and the ninth of the natural; from the ninth it passes to the eleventh Note of the natural Scale, and the fifth Third of the Harmonic, from the eleventh to the thirteenth, and from that to the fifteenth, the last, which are the sixth and seventh Thirds, which forms the Harmonic Scale, and all Lateral of the above first Diagonal are disposed by Thirds, and the opposite Diagonal, with its Lateral, gives all the Octave, which is the general Magazine, not only of the Musical Sounds, but also of all possible others.

Third N.B. From the above system of combination of sounds, which also makes a perfect quadrate with the scales of every one of these sounds, is manifested the natural system of progression, also by its first diagonal descending to the opposite angle, proceeding always by fifths, as is to be seen in example VII. plate IX. the opposite diagonal, and its laterals, gives also the octave, and from the diagonal and its laterals, the system of the natural progression, it is restored to the natural scale, the opposite diagonal gives the same octave, as is to be seen in example VI. plate VIII. all that confirms the new two systems of the combination of sounds, and of their progression.

Of the Artificial Scale, commonly called the Scale of the Minor Mode, or the Flat Third.

ARTICLE IV.

WE have seen in the Introduction, that the old Greeks have begun their first scale with only four sounds, disposed in four strings of their lyre, by the intervals of semitone, tone and tone; afterwards, for the benefit of their voice, were augmented with three other sounds, by three other strings added to the lyre, in all seven strings, with which was formed their diatonic system, or scale, and the two tetrachords conjoined, which tetrachords being not sufficient for the different voices high and low, were augmented to five tetrachords disposed in sixteen strings, which together was called the greatest, and unchangeable system. *Aristoxenes* distinguished his fifteen modes by tetrachords (which properly are diatessaron) each distant a semitone, one from another) dividing the octave in twelve semitones. *Guido Aretino*, not finding the tetrachords of the Greek proper for the harmony, he added to each tetrachord two sounds in the grave, by which he formed his hexachords, as are all distinctly explained in the above Introduction. From all which it seems very clearly, that the *Greeks*, old *Romans*, and *Guido*, with all his followers, have not known other scales than those produced by their tetrachords and hexachords, without any distinction: Moreover, the first diatonic scale, with the addition of the chord *proslambanomenos*, was divided in seven species, as before-mentioned, in four species the fifths, and in three species the perfect fourth, with considering only their distinction and difference by the different situation of their semitone, consequently without the notion of the principal scale, nor in the major mode, nor in the minor mode; and being transposed, the octaves, and their species, were always considered in the same order of their tetrachords and hexachords. The different modes and melody of the *Greeks* and *Romans* never sorted from the tetrachords, but only passing from one to another; and the harmony of *Guido* never passed his hexachords, only passing from one to another, all without changing the chords of the greatest and unchangeable system, excepting in the occasion of the three genders and their colours, for which the *Greeks* were obliged to change the order of their tetrachords with two mobile, and two stable strings, as explained in the Introduction.

But by the gradual progress of the harmony, it now is perfectly clear, that one natural scale must subsist, and it is the principal; and also another scale different in the order of their sounds from the first principal, which second scale must be considered as a principal one, which is here named the artificial scale, being perfectly accommodated, and successively accomplished by the art, in imitation of the first principal natural, in regard to the manner of ascending the octave, but different in its third sound. This artificial scale may be applied to every sound of the natural scale; but in this treatise it is applied to the scale of C, with minor third, because the first principal scale being in C with major third, may more easily be known the difference between each other.

The essential difference between the natural and this artificial scale, are as follows. The first third in the natural scale is major, or naturally sharp, but in this artificial scale, is minor, or flat. The second sound, or note, of both scales, is distant a major second, or full tone, which

which is a necessary condition in all the principal scales, as it is the perfect fourth and fifth; and as the natural scale has its fourth note, with its third major, being the same fourth, the subprincipal relative note of the same natural scale, as before-mentioned, this artificial scale has also the third of the fourth note flat, the like hath its principal note: But because all fundamental guides must have their thirds sharp, as their indicative notes, for to pass to the principal note, which sharp thirds are the seventh major, or sharp, in the order of their principal scales; and as it is not possible to pass gradually from the minor, or flat sixth, to the major seventh, being distant three semitones, which properly is an interval of a minor third, consequently art has been obliged to change the minor sixth into the major sixth, in order to help the melody, in ascending gradually to the major seventh, which major seventh becomes the necessary indicative sharp third of the fundamental guide, in order also to ascend gradually to the octave of the principal note. On the contrary, in descending from the same Octave to the principal note, or only to the fourth note of the scale, which (as has been said) must have its third flat, like its principal, the above major third of the fundamental guide must be changed into a flat seventh of the scale, in order to descend gradually to the sixth note, which also must be changed into a flat, to become a flat third to the above fourth note of the scale, which being the subprincipal relative, must have its third flat, as above-mentioned. This occasions two different scales, one for ascending, and the other for descending, which two scales happens only in the scale of the principal, and of the guide, the other relative scales are not changed, as may be seen in example IX. Plate XI. and the above two different scales of the principal, and its guide, serve only for the melody of the parts, and of the bass, when it is not fundamental, as often happens in figurate and common music: For example, the common bass descending gradually from the octave to the guide, it may pass either by the seventh and sixth major, or minor at pleasure; but when the same common Bass makes the accent in the sixth note descending (as above-said) from the octave, in this case both the sixth and seventh must be minor; but this minor sixth may afterwards be changed at pleasure, when the accented note is not short, in major sixth, before descending to the fundamental guide, which guide must have its major indicative third, as mentioned before. These different accords, or combinations, will be demonstrated in the last Book, which treats of figurate music; the fundamental bass being not concerned in the combination, arising from the gradual movement of the common bass, which combinations are almost all inverted from the fundamental combinations.

N. B. It has been mentioned, that the major third and the minor seventh, in the combination of the fundamental guide of the natural scales, and its transposed scales, may be called fundamental, and harmonic indicative third, and seventh, to distinguish them from the thirds and sevenths of the relative Guides, and because they indicate the approach of their principal scale by ascending the third to the same principal, and the seventh descending to the major natural third of their principal scale the natural, and ~~the~~ transposed scales; both proceeding by semitones by contrary motion. But in the artificial scale, and its transposed scales, where the first third is flat, consequently the fourth Note of the same scales, which become sevenths in the combination of their guides, resolving after into the flat third by descending a full tone, instead of a semitone, as in the natural scale; for this reason the third of this artificial scale, being minor, cannot clearly be indicated by the same seventh minor by descending a full tone; because, for example, supposing the above artificial scale being C, with flat third, its guide G, with its seventh minor F, descending to E flat, the same is done in the scale of E flat by the same note F, as fifth of its guide, B flat descending also to the same E flat, and notwithstanding that F descends into the principal note, as fifth of its guide; and in the scale of C the same F descends as seventh of the Note G guide into the third flat of the scale, is not clearly perceived as indicative seventh: Therefore instead of the same seventh, the ninth minor to the guide, which is a minor third above the minor seventh, and a minor second above the octave, or double octave of the principal note, becomes by way of supplement the harmonic fundamental, and indicative note, falling by

by a semitone into the perfect fifth of the scale; and the same ninth being flat, which in the natural scale is major, determines the artificial scale of minor third by descending in contrary motion of the indicative third, which ascends to the principal note of the scale, in the same time that the ninth descends to the fifth, as abovesaid.

Of the relative Scales to their principal artificial Scale.

ARTICLE V.

ALL the relative scales to this artificial scale are different from their principal scale, and also from each other, as may be seen in Ex. IX. Plate XI.

In the antecedent Ex. VIII. Plate X. of the natural scale with its relatives, the third scale, which begins in E, and the seventh scale B, are the most imperfect, as has been mentioned: But in the artificial scale the most imperfect in their relatives are the scales of D and A. The scale of D, which is the second scale in the above example, and the first of the relatives, has the false fifth A flat, and the sixth scale of A flat, which is the fifth of the relatives, has the false fourth D, and this is an essential difference between the two principal scales, the natural and the artificial; the natural scale having the false fourth between the fourth note and the seventh; and the false fifth, between the same seventh note and the octave of the same fourth note; and the artificial scale has the false fifth between the second sound, or note of its scale, and its sixth sound, and the octave of the second note; but in the artificial scale may be changed the false fifth, and false fourth into perfect on some particular occasions, as will appear in the canons of the harmonic code in the next book; and for the same reasons before given, the two scales relative D and A flat of the artificial scale, as the other two, F and B, in the natural scale, cannot be freely used in harmony, but with some limitations and exceptions, as will appear in the same canons of the harmonic code.

The two principal notes, the principal and its principal guide, have both two scales, one ascending, the other descending, as above-mentioned; the difference between the other relatives is clearly apparent in the above Ex. IX. Plate XI. and the same explanation done for the relatives of the natural scale, may be applied to these of the artificial scale, in the same Ex. IX. Plate XI.

Of the transposing Scales.

ARTICLE VI.

TWO are the scales of transposition, both arising from the two fundamental consonant movements of the perfect fifth ascending, and descending, which movements gives thirteen sounds, divided by twelve intervals of a semitone each; and notwithstanding that from the two above motions of ascending and descending, there arises two scales, these two scales are composed of the same sounds, but of a different denomination, as may be seen in Ex. X. Plate XII. in the first line of this example is described the ascending progression, and the descending in the second line: The ascending progression begins with the note F ascending to C, and the descending progression begins with the note B; which two notes, F and B, being the two indicative notes of the natural scale, one descending and the other ascending, in contrary motion, gives first the seven primary sounds, before they pass to those, which divides successively all the tones of the octave in two semitones. By the first scale ascending are produced the notes of the sharp denomination, and by the other descending, those of the flat denomination, as it is explained in the same above example. These different notes marked sharp and flat, before mentioned, are the same sounds, but only different in their denomination, and in their natural place in the scale: For example, in the ascending scale the note D sharp passes to A sharp its perfect fifth; this

this A sharp must be noted in the same place, where is noted A natural, only with the addition of the sharp sign: In the other descending scale the note F naturally descends to B flat, being its perfect fifth; this B flat must be noted in the place of B natural, with the addition of the flat sign *b*, but these different places and names change not the sound; the reason of it is evident; for D sharp to A sharp is an interval of five sounds, with their proper names and places; so from F descending to its fifth B flat, this B flat cannot be named A sharp, nor A sharp B flat, being both six names to six consecutive notes in the place of their proper scales; from this Reason it is apparent, that the signs of sharp and flat *b*, are only necessary to put the sounds with their proper names in their proper place of their different scales. The sign of sharp augments the sound of an equal semitone; so A sharp being augmented of one semitone, is the same sound as B flat, diminished a semitone from B natural, but named and put in the place proper to their particular scales: The same happens in all other sharps and flats. All this will appear very clear in the explanation of some equivocal accord, which will be done in the last book; where will be demonstrated, that with only a simple compound accord, the harmony may pass into divers opposite scales sharp and flat; and that will be the last evidence of the unius instance of the division of tones, and semitones into major and minor. From the above two scales ascending and descending, arise two other scales proceeding gradually by semitones, as are disposed in Example XII. Plate XII. These two scales are properly the scale of transposition, into every degree of which two scales, both the natural and artificial scales, may be transposed.

The sounds of these two scales of transposition are also the same, but of different denomination, as those of the other two principal scales arising from the motion of the fifth, before explained; consequently both these two scales may be considered as one, notwithstanding the divers positions, and names, as is commonly done by the musicians.

N.B. The signs of sharp and flat *b*, when they are put in the beginning of the composition immediately after the sign of the key, and before the sign of time, which rules the measure, signifies that the scale is not natural, but artificial, or transposed from the natural, because the natural has its sound without any of the above signs; and when the same signs are accidentally put betwixt the composition, the sharp indicates that the note is transposed a semitone higher, and the flat a semitone lower, consequently the scale becomes changed by the same signs, namely, more acute by the sharp, and more lower by the flat.

Of the Scales transposed from the Natural Scale.

ARTICLE VII.

AS the principal natural scale may be transposed into every one of the thirteen sounds of the scales of transposition, consequently every transposed scale must have their sounds transposed into the same order of their original mother scale; and being thirteen sounds, from which must be abstracted the extreme acute, being considered as a repetition of the same natural scale, but higher, remains twelve sounds, which must have their proper scale, to which is added five more of a different denomination; the twelve scales arising from the ascending scale of transposition, and the five of different denomination from the other descending scale, as are all described in Example XIV. Plate XIII.

The first scale is the first original scale, the second is the same original scale transposed a semitone higher, the third is transposed a tone higher, the fourth three semitones higher; and so of the rest, proceeding higher by semitones. All these scales may be used, but some of different denominations are more eligible than others: For example, in the ninth scale of the above Example XIV. Plate XIII. which represents the scale of G sharp, in order to ascend the octave, must be used the note F, double sharp, which is marked thus (X) commonly, but improperly called diesis enarmonic, and in English extreme sharp, which is the properest term: But in ascending to the same octave G sharp by the

other scale under the denomination of A flat, which represents the sound as G sharp, consequently of the same scale, there is not occasion of any double, or extreme sharp, as is apparent from the opposite scale to the above ninth scale, which is the fourth scale in those of different denominations in the same above example, for which reason the fourth scale of D sharp, is absolutely improper to be chosen, having two notes double sharp F x, and G x, consequently the scale of E flat, which contains the same sounds, as the scale of D sharp, is the proper scale to be used. The seventh scale of F sharp is generally better than the scale of G flat. The eleventh scale in A sharp is evidently impracticable, having three notes extreme sharp, but in changing the denomination to B flat, which is composed of the same sounds of A sharp, becomes very easy and natural. These extravagant scales may happen by accident, in the middle of the compositions, but they never must be chosen for principal scales. This is what is to be observed in general, in regard to the transposition of the scales.

Of the Transposition of the Artificial Scale.

ARTICLE VIII.

THE artificial scale, as before said, has two different scales, one ascending, the other descending, every one forming thirteen scales transposed from the principal, from which may be deducted the last scale, being composed of the same sounds, but one octave higher, therefore must be considered only twelve, with five more of different denominations, but being two scales, one ascending, the other descending, as before-mentioned, the same twelve scales, and the five of different denomination, are augmented to twenty-four, and ten more of a different denomination, which are divided in two examples, as may be seen in Example XV. and XVI. Plate XIV. and XV. the first of which belongs to the ascending scale, and the other to the scale descending, every one of them having joined their scales of different denomination.

The same explication, which was made use of in the transposed scales from the natural, will be sufficient for these two examples of the transposition of the artificial scale, the principal difference being in having its first third flat, and the second third, which forms the perfect fifth, consequently sharp, contrary to the natural scale, which hath the first third sharp, and the second flat, as has been explained; only it must be remembered to chuse always that scale which is the easiest, avoiding the double sharps, or double flats, notwithstanding the variety which adorns this art, it must be attended with the greatest facility.

Of the Number of the different Scales arising from the two Scales of Transposition.

ARTICLE IX.

FROM the two principal scales of transposition in Example XIV. Plate XIII. and Examples XV. and XVI. Plates XIV. and XV. arises twelve principal scales, all transposed from the natural scale, with five more of a different denomination, as has been explained in the seventh article; and because the artificial is distinguished by two scales, one ascending, the other descending, this occasions twenty-four transposed scales, twelve from descending, and twelve from ascending, with ten more of different denomination, which together amounts to thirty-four scales, which being joined with the twelve scales, and ~~five~~ more of different denomination, derived from the natural scale, as above explained, makes in the whole fifty-one scales, all principal; and every one of those principal scales having their proper seven relative scales, which joined all together are three hundred and fifty-seven relatives, which joined with their principal, amounts in the whole to four hundred and eight scales, almost all of them being useful to the harmonic art, in the way of variety.

N. B.

N.B. The musicians have commonly given, and still give indifferently, the names of key, tone, or mode, to the scales of sounds; but these equivocal terms in this treatise have been distinguished.

The name of key signifies properly the sign or mark, which is put before the scales belonging to the melody of the different parts, as the key of C, or F, or G, belonging to middle, low, or high parts, as sopranos, contraltos, tenors, and basses.

The term tone has properly been applied to the intervals existing betwixt two sounds, which gradually follow one another in the scale, as between C, D, or D, E, &c. and is called semitone, when the distance or interval is not a full tone, as E, F, or B, C.

And the name mode, which is the less equivocal, signifies properly a certain particular manner of singing, as mode or manner, French, Scotch, Polones, or Sicilian, just as the Greeks did in their modes Ionic, Doric, &c.

For the above reasons these equivocal terms have been distinguished throughout the whole of this treatise; and instead thereof we have used only the proper term of scale, which properly signifies a series of sounds in an order gradually disposed from grave to acute, or *vice versa*; and without any further explanation, it may be understood by all who will, or can understand it, and the other terms applied separately, as above explained, namely, the word key, to the different scales of melody, the other word tone to the intervals, and mode, as manner.

Of the different Scales of Melody and their different Keys.

ARTICLE X.

THE scales which belong to the melody of every part, are made use of in order to suit the different acuteness, and gravity of the different voices or instruments.

These scales are in number eight, every one having its proper different key, which shews the order and place of the sounds in every scale; and these keys are described in Fig. VI. Example X. Plate V. and explained in the Introduction of this Treatise, where also has been mentioned, that now they are reduced to the number of five, but are all used in great church music in eight and sixteen parts, as distinctly explained in the same Introduction: Therefore we have now described in the Example XVII. Plate XVI. all the eight scales, with their limited sounds descending and ascending.

Every scale has its proper key, to which successively follows that scale ascending and descending, which is proper to every one of the different voices. The notes of these scales have their proper limits, which must not be passed in ascending or descending in compositions, where all the different voices are joined, as in full chorusses, and in three or four voices, or more: But in compositions for some particular voices, the limits of these scales may be exceeded according to the compass of the voices. The instruments, as violin, oboe, and violoncello, are not obliged to the above limits, which may be passed according to their particular practice and use.

Of the divers Positions of the Unison respectively to the different Keys.

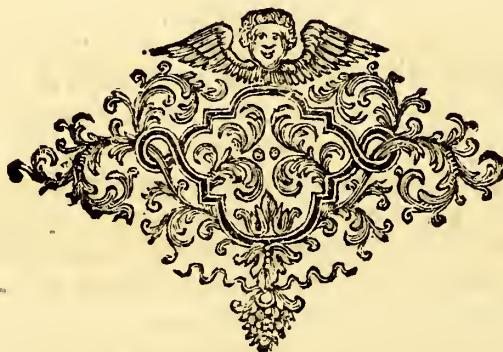
ARTICLE XI.

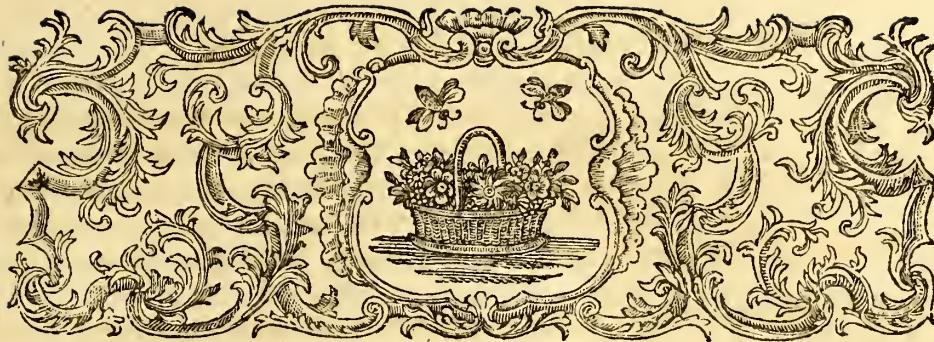
ALL the notes in Example XVIII. Plate XVI. which are under the different keys of F, C, G, in their different places, are all unisons, being all the same note C, from their place or different position to the correspondent unison C, in all the other scales, is known

known the distance of every sound in their respective scales, and that serves to keep every part in its proper compass, and also the easier and more immediately to know the distance from one key and scale to another, and consequently for applying the proper notes which belong to every particular voice, every one of which cannot exceed their nearer parts in the acute or grave, but they must be always below the nearer acute, and higher than the grave part.

Now since we have known what is music in general, its sounds, its different systems, and their division and scales; we shall pass on to digest and explain the fundamental harmony, its laws and rules, contained in the next books.

END of the FIRST Book.





D E L L'

A R T E A R M O N I C A :

O R,

A TREATISE of the COMPOSITION of MUSIC.

BOOK II.

Containing the Fundamental Harmony, explained by the Fundamental Counterpoint ; by which are formed all the Canons, orderly joined in one Harmonic Code, containing and explaining all the Laws and Rules of all possible Combinations of Sounds, and their Progressions ; and first the following Description of the said Fundamental Counterpoint, and of its Compositions, which make the Code Harmonic.

Of the Fundamental Counterpoint.

 N the fifth article of the first chapter of the antecedent book, the harmony was divided into fundamental and figurate : The fundamental becomes now the subject of this book. It is called fundamental, because properly it is the basis or foundation of harmony, and is the only practical theory of the art ; which is explained by a course or series of harmonical compositions, composed by a fundamental counterpoint, as we call it, as has been mentioned in the above-said article, Chapter I. Book I.

This fundamental counterpoint was never hitherto known, and consequently never used, being very different from the counterpoint commonly used in church music, and in teaching the composition of music. In the counterpoint formerly, and now in the vogue, the bass and the parts move either gradually or skipping at pleasure : For this reason the composition of music cannot be learned otherwise than imperfectly, and by a long practice, without knowing the derivation of the particular rules belonging to the divers combinations of sounds

and their progressions. But in the counterpoint here introduced, the motions of the bass, and also of the parts, are limited; the bass moving only by its competent skips, and the other parts moving gradually, without skipping; in this manner the different motions of the bass are all distinguished; also the different combination of the sounds formed by the parts to every different and particular motion of the bass, which in simple progression passes through all the eight original sounds of the natural scale, and in mixed or varied progressions thro' all the semitones of the scales of transposition. By this means it is very easy to know distinctly all the general and particular rules of the combinations and progressions of sounds; which rules it would be almost impossible to demonstrate, without the above distinct and successive order. This order appears very clear by the succession of the compositions of the same fundamental counterpoint, which compositions are called canons, because every one contains and shews a law or rule to be observed in the composition of music; and all the same canons joined together are called the harmonic code, because it contains all laws and rules of harmony.

This harmonic code is divided into two parts; the first part contains the divers combinations of the sounds, simple, compound, and full, belonging to the divers motions of the bass in simple and natural progression: The second part contains the same different combinations belonging also to the different motions of the bass, but in mixed and varied progression. The whole code is divided into chapters, and every chapter into articles. Every chapter contains one of the fundamental motions of the bass; as by fifths or thirds ascending and descending, and in its articles all different combinations which belong to the same motion of the chapter, as simple, compound and full; in simple progression in the first part, and in mixed in the second part of the same code.

The FIRST PART of the HARMONIC CODE.

C H A P. I.

Of the consonant perfect fundamental Movement of the Bass, comonly called the Skip of Cadence.

THE movement of the fundamental consonant perfect skip of cadence is the principal of all other movements or fundamental skips, being the more natural, and consequently the more pleasant. It is called perfect, not only because it goes directly to the cadence, by which are perfected all harmonical compositions, but also for being capable of all the gradual compound combinations, as has been mentioned, and as will clearly appear in the following canons in their respective articles.

ARTICLE I. *Of the Consonant Combination.*

CANON I. PLATE 17.

THIS combination is called consonant, because it is only composed of two consonants, fifth and octave; and because it is not joined with some harmonic sounds, as the third or tenth, cannot be called harmonic.

In this canon the fundamental bass moves with the perfect consonant skip of cadence passing through all the notes in the natural scale, accompanied only with the fifth and octave, which changes alternately. The first part begins with the fifth, which descending a tone, passes to the octave of the succeeding note of the bass; the second part, which begins

begins with the octave, keeps firm, and is changed into a fifth at the next note by the motion of the bass: The same progression and combination are continued by the bass and the parts till the end of the canon; the two parts, when one descends, the other keeps firm, proceeding in this manner by fourths and fifths, in descending the scale together with the bass.

First N. B. This canon being only consonant, and consequently not harmonic, cannot subsist in two or three parts; but it is of use in five or more parts, for doubling the two consonants, the fifth and octave.

Second N. B. The bass in the second measure in all canons of simple progression, and also with the compound by seven, used in this chapter, being in the note F, passes to the note B, which is a false fifth descending, or a false fourth ascending, consequently the note B being deprived of its perfect fifth, may be considered as a false fifth, as it is; but this false fifth B to ~~B~~, being prepared in the antecedent combination of the note F by F its octave, passes as a just fifth, and the ear is not offended. Moreover, these two notes B and F, which are the two indicative notes of the natural scale, must necessarily be distant six semitones, by which notes must also the bass fundamental pass with its progression, notwithstanding that the same interval is not a perfect fifth; otherwise proceeding by a perfect fifth, it transposes immediately the scale. There is another reason which arises from the two principal stable and immovable fundamental basses, but it is omitted, as the explanation would be too long, and the above two reasons being sufficient for practice.

ARTICLE II. Of the simple Harmonic Combination.

CANON II. PLATE 17.

THIS canon shews the rule of using the simple combination, commonly called the common accord, which is composed by the third, fifth, and octave.

The part which begins with a fifth does not descend to the octave, as in the first canon, but ascends a tone higher to give the third to the succeeding bass note, which cannot be done by the other parts in a gradual motion. The same third ascending with the following note, gives the octave to the bass note, which octave having no other harmonic sound, or consonant, near to pass into, must rest in its place, as has been done by the same octave in the first canon, becoming the fifth to the following bass note; which fifth passes to the third, and from the third to the octave, continuing the same progression in all the canon. The other parts proceed in like manner. The first and second part moving by a third and fourth between each other; and the second and third parts move by a fifth and sixth between each other, all the parts proceeding in contrary motion to the bass; the bass descending, and the parts ascending, as it appears in the canon.

Of doubling the two consonant Fifth and Octave, making six real Parts.

CANON III. PLATE 17.

THIS canon is formed by the union of the two antecedent, from which union the parts of the fifth and octave being consonant, consequently of a lesser sensation in respect to the third, which is harmonic, therefore are doubled. In this canon is only to be observed, that the two parts which are doubled descends with the bass; on the contrary the three other parts ascend, as in the second canon.

By the contrary motion of the parts, the two consonant parts are doubled, without proceeding in unisons in fifth and octave, with the other two parts: The third needs not to be doubled in simple combination, being perfectly harmonic; if doubled, it would make the parts less sensible.

ARTICLE III. *Of the ~~Compound~~^{Compound} Combination.*

CANON IV. PLATE 18.

NOW it must be observed in what manner the simple combination may be changed into the compound combination, which is done by adding of two of the superior thirds to the simple combination, as the seventh and ninth, &c. The seventh sound of the natural scale, or whatsoever scale transposed, or not transposed, is the first third above the other two thirds which compose the fifth: This seventh is called by practitioners dissonant; and discord, or false, by the *Italians*, as well as other superior thirds, the ninth, eleventh, and thirteenth; but notwithstanding these terms (particularly that of dissonant) are improperly used; however, to prevent mistakes, we shall hereafter use the term of discord or false, and also the terms of preparation and resolution of the above discords.

The seventh being considered as discord, consequently must be prepared, which term signifies that it must be before a concord in the preceding combination, (the concord sounds are the thirds, perfect fifths, and octaves) and after becoming discord in the succeeding measure, or note, it must become again a concord in the subsequent note; and this is called resolution of discords, or falses. These discords, with their preparations and resolutions, not only regard the parts with the bass, but also betwixt one another of the same parts. In this present canon, the seventh is prepared by the third, in the first part, and again resolved into a third, by descending one note: The second part, which begins with a fifth to the bass note, ascends a note to the third, in order to prepare the seventh, in the next note, which seventh is afterwards resolved into a third, both the parts continuing the same progression alternatively. The two parts proceeding betwixt each other by fourths, resolved into fifths, as in the canon.

Of the Manner of adding the Fifth, and Octave, to the above Canon.

CANON V. PLATE 18.

IN the above canon is wanted the fifth, and octave, to make up the complement of the compound combination to the antecedent fourth canon, which has only the third and seventh; but by adding the first canon, they will compose the present canon with the third, fifth, seventh, and octave; where the two first parts proceed betwixt each other by seconds prepared by the thirds, and resolved into thirds; the same proceeding as between the third and fourth part; this fourth part, with the first part, moves by sixths, and the second with the third part by thirds, but the first part with the third, also the fourth part with the second proceeds from the fifths to the fourths, descending the parts with the bass, two by two, as it is in the canon.

Of the Combination of the Ninth.

CANON VI. PLATE 18.

THE ninth, being a third above the seventh, which seventh being prepared by the third, and resolved into the third, consequently the ninth must be prepared by the fifth, and resolved into a fifth in descending like the seventh. The two parts which compose this canon, gives alternately the fifth and ninth to the bass, proceeding between each other by a fifth and fourth, like the seventh.

The Rule of introducing the Ninth, instead of the Octave, with the Third, Fifth, and Seventh.

CANON VII. PLATE 18.

BY joining the fourth and sixth canon together, is formed the combination of third, fifth, seventh, and ninth, instead of the octave, as in this canon.

The ninth arises from keeping firm the fifth, instead of descending to the octave; the two parts which moves from the ninth to the fifth, proceed betwixt each other by fourths, resolved into fifths; the two higher parts descend together by thirds, and also the two lower parts; only when the two first parts move, the two lower keep firm, making a combination of third, fifth, and seventh, between them all, and by the two superior parts descending, the seventh is resolved into a sixth, and the fifth passes into a fourth, which resolves again into a fifth; likewise the two other parts afterwards descending, the sixth becomes a seventh, and the fourth a fifth, proceeding continually in the same manner; also betwixt the third part, and the two superior, which makes an accord of third and fifth, the two higher parts descending become a second and fourth; the third part afterwards descending the fourth, is resolved into a fifth, and the second into a third.

N. B. In the second bar, or measure of the first part, the note G, which forms the ninth to the bass note, and it is afterwards resolved into the fifth F, in the following measure, marked thus *, may at first sight seem a discord, because, being a false fifth, it may seem not prepared by the antecedent note, as it is prepared in the second and third canon, where it is prepared by the octave; but here the ninth is considered as an appoggiature, which is a combination of the same antecedent note, instead of the octave, which as octave of the principal relative note of the bass, should always be understood; and as the same note F is expressed in the antecedent measure by the bass note, this serves for the preparation of the false fifth, and notwithstanding that the false fifth is not prepared by its antecedent note, but the preparation arising from the other sounds, or notes, which may subsist in the same combination, the ear is not offended.

Of joining the Octave to the above Canon, making eight real Parts.

CANON VIII. PLATE 19.

THE disposition of this canon into eight parts, consists in uniting the seventh canon with the second, in the following manner. It must take the four parts of the seventh canon, which gives the seventh and ninth to the bass prepared, and resolved, as in the canon, and the three parts of the second canon; by this means the fifths and thirds are doubled, because it being betwixt the seventh and the ninth to the bass, the octave becomes more sensible, as dissonant with the same seventh and ninth: Besides, as all the superior thirds, excepting the fundamental seventh, very often serves as appogiatures to the following note, and particularly the ninth to the octave, consequently the same ninth serves instead of the doubled octave, and it is at the composer's pleasure to use the octave, or the ninth. If the composer would suppress the ninth, and use only the octave, in that case the second canon must be joined with the fifth canon, by this means the octaves are doubled like the thirds and fifths. But if the composer would double the octave, at the same time when the ninth subsists, he must add two parts more, which are the two consonant parts in the first canon; this will make a composition of ten real parts, in which the part which descends from the ninth to the fifth, proceeds continually by fourths, and consequently, when the same part which descends from the fifth to the octave, is inferior to the other, which descends from the ninth to the fifth, it proceeds always by fifths; which progression is

permitted in compound and full combination, because the harmony is not only complete, but also the octave is doubled, as is the fifth; but in simple combination, it cannot subsist.

Of passing from one Discord to another.

CANON IX. PLATE 19.

THIS canon is compounded of three parts, which constantly keeps firm in the first simple combination belonging to the natural scale, in which the bass continues its progression. The first part begins with the third to the bass, which third, according to the rules of simple combination, would ascend to the octave, but here it keeps firm for the preparation of the seventh, as in the rules of the compound combinations; this seventh, which, according to the same rules of compound combinations, ought to be resolved in descending to the third, but keeping firm in the same note, is changed into the eleventh, commonly called the fourth, by the motion of the bass: This fourth would have been resolved by the rules of the compound combinations, by descending to the third, but keeping firm, it is resolved into the octave, by the progression of the bass, which resolution belongs properly to the full combination; after that the octave passes to the fifth, as in the manner of the simple combination, which fifth continuing firm in its note, prepares the ninth, and this ninth continuing firm, is changed in the thirteenth, commonly called the sixth, by the progression of the bass, as in full combination; at last this sixth, or thirteenth, is resolved by the same bass into the tenth, or, as commonly called, the third. The other parts proceed in like manner, remaining always firm, all being resolved by the progression of the bass.

N.B. This canon cannot be of use in the progression, as it is, being formed only to shew the passage of the seventh and ninth into another discord, when the same seventh and ninth may happen in every one of the three parts which compose the original simple harmony, sometimes may be continued one or both parts, which begins with the octave, or with the fifth in a long progression of the bass, without changing the scale, because being both the octaves of the principal, and its guide, as immovable, and stable fundamental, which, as has been demonstrated in the antecedent book, may both continue under all combinations in simple progression: In regard to the harmonic third major of the simple combination, it cannot be used freely, being too much sensible, and consequently it will confound the simple combination, which belongs to the succeeding note of the progression of the bass; but in solemn music, where all the simple combinations are tripled, and the compound doubled, may be used on some occasions, as in the canon.

ARTICLE IV. *Of full Combination.*

CANON X. PLATE 20.

THE full combination by which this canon is composed, is derived from the union of almost all the antecedent canons. The first three parts are the same as in the antecedent ninth canon, composing the simple combination to the lowest principal, unmoveable, fundamental basses, and all together with the following parts, the full combination to the other basses. The two following parts, marked 4 and 5, are the two parts in the first canon, which doubles the two consonant fifth, and octave. The next eight parts, the sixth, seventh, eighth, ninth, tenth, eleventh, twelfth, and with the first following bass, are the same which compose the eighth canon of the compound combination. The two basses numbered 13 and 14, proceed betwixt one another from the unison to the octave, which in full combination are accounted two different parts, because, strictly speaking, the unisons are not the same found as the octaves; but in compositions of less than eight parts, they are accounted only as one part, because they have the same combination, and consequently

quently the same figures : These two basses are the fundamentals of the progression of every harmonic combination, so called to distinguish them from the last two stable and unmoveable fundamental basses, which continue firm to the end of the canon ; the lowest is the principal, and the other the guide, as mentioned in the first book. In this canon all the sounds of the octave are continually combined in full or general harmony, in simple and natural progression of the perfect consonant skip of cadence, which skip is the principal of all the progressions, and to which every other movement are subservient and subordinate. It comprehends all the more natural and common proper preparations and resolutions, as has been explained by the antecedent canons : But because the full Combination is continued successively all thro' the canon, it cannot be of any use in compositions of figurate harmony, or common music, in which the simple, or compound combination, must be mixed with the full combination, as will be explained in the last book. Therefore this canon is put here only to know the derivation of the full harmony, and as an epilogue, or a summary of all the antecedent canons, consequently it may serve for a memorandum of all the natural and common rules concerning the different combinations to this fundamental skip of cadence.

ARTICLE V. *Of the Seventh and Ninth passing to another Discord; as commonly used.*

CANON XI. PLATE 21.

IN the ninth canon it was shewn in what manner a sound may be continued passing from one discord to another through all the octave, being at last resolved by the bass ; but in this canon is shewn the passage of one discord to another, and afterwards their proper resolution in the second time, or in the same note of the bass in the following measure, the notes of the bass being all doubled for this purpose. The two first parts make the seventh and ninth in the second measure ; and the third and fourth parts the same seventh and ninth in the third measure ; each passing to the following measure keeps firm the same notes which are changed by the progression of the bass from the seventh and ninth into the fourth and sixth, which are immediately resolved in the middle of the same measure, the fourth descending into the third, and the sixth into the fifth. The first part which gives the ninth to the bass proceeds with the second part by thirds, and with the third part by thirds resolved into fifths, and the same first part proceeds with the fourth part by sixths and sevenths, which sevenths are resolved successively into sixths ; the second part with the third, proceeds by a second resolved into a third, and with the fourth part proceeds from third to third, as appears in the canon : These sort of falses may be called falses of postponement, because the resolution is prolonged or postponed.

How to resolve the Seventh and Ninth in ascending.

CANON XII. PLATE 21.

THE resolution of the seventh and ninth in ascending must be done as in the above canon, to the same note of the bass, the notes being doubled to the purpose, the discord, or false, falling in the first note of the measure, and their resolution in the second note of the same measure, in that manner the falses notes and their resolutions are distinctly and clearly perceived. In this canon all the parts proceed with the same succession of notes : The fifth prepares the ninth to the first note of the following measure, and the ninth is resolved by ascending to the third in the second note of the same measure ; the same third serves for a preparation to the seventh in the next measure, and in its first note ; and the same seventh is resolved ascending to the octave in the second note of the same measure : The octave passes to the fifth in the following measure, which fifth prepares again the ninth in the next measure, which is resolved by ascending to the third in the same measure, continuing in this manner, as it is apparent from the canon. It must be observed in this kind

kind of resolution of these falses ascending, that the discords derived from these preparations, being the same notes continued, instead of ascending or descending for the simple combination to the motion of the bass, by which they are changed in discord, they ought to be considered as appogiatures in ascending; but the best appogiatures are those performed in descending than ascending, as being more natural, and consequently more pleasant. Notwithstanding that the seventh when it properly is a fundamental indicative note descending, belonging to the fundamental guide, and when the fundamental guide keeps firm, it may ascend to the octave of the same guide, being its principal note, from whence it derives, so the resolution ascending may be equally good and pleasant: But the ninth resolving ascending to the third it returns far from its principal note, *viz.* the octave, with a contrary motion; for this reason it must be used only upon some particular occasions, as in grand music, where all the parts are doubled and tripled.

ARTICLE VI. *Of some uncommon Combinations; and first, of Falses by Anticipation ascending.*

CANONS XIII, XIV, XV. PLATES 21, 22.

Anticipation is the contrary of the postposition, the notes which makes the first combination to the bass move ascending to the following combination, before the bass moves itself; and this anticipation being the combination of the next note of the bass, consequently is a discord to the existent bass note, which discord is resolved by the note of the following motion of the bass, as in the canons. In the thirteenth canon the note which makes the third passes to the fourth ascending, consequently the bass has over it the combination of the fourth and fifth, and the fourth serves by way of anticipation of the octave of the following note of the bass; and the part which makes the fifth, ascends to the third, which prepares the fourth, which again is resolved by the motion of the bass into the octave.

The fourteenth canon shews the manner of forming the anticipation with the fourth joined with the sixth to the third and octave, which is done, as the above anticipation of the octave by the fourth; the sixth making the anticipation of the third, as in the canon.

The fifteenth canon is compounded of the thirteenth canon joined with the first canon, by which the two consonants are doubled, and the same first canon may be added to the fourteenth in order also to double the consonants.

Of the Anticipations in descending.

CANONS XVI, XVII. PLATES 22, 23.

THE sixteenth canon is almost the same as the fifth canon, the only difference is, that the fifth in canon V. descends directly to the octave in the next measure; and in this sixteenth canon it descends into the fourth in the same measure, becoming the anticipation of the octave in the next measure, consequently the combination in the first part of the measure is the fifth and seventh, and in the second Part of the same measure it is the fourth and seventh. The seventeenth canon is the sixteenth, with this difference, that the seventh descends to the sixth in the same measure, which sixth becomes the anticipation to the third, as it appears in the above canon; the bass having the combination of the fifth and seventh to the first note of the measure, and the fourth and sixth to the second note of the same measure, which fourth and sixth are the anticipations of the third and octave.

N. B. It must be observed, that the anticipations in descending arises from the compound harmony, where all the parts descend with the bass; on the contrary, on the simple combination, as the parts ascend, and the bass descends, the anticipations must ascend with the parts.

Second N. B. These anticipations are only used in grand music of churches, where all the principal parts are doubled, tripled and quadrupled; and particularly, and almost only, in the full combination of long cadences; and more particularly in the final and last cadence, which generally holds long for two, three, or more measures; and every measure having at least two accented times; we must take care that the anticipation fall not upon the accent time, but upon the part of the measure which is nearest to the conclusion, and must use them also very seldom, and with judgment, all these sort of discords being of unnatural preparation and resolution.

ARTICLE VII. *Of the Discords called by the Italian Masters Falses by Change.*

CANON XVIII. PLATE 23.

THIS canon is composed of ten real Parts to two choruses, from which appears the rule and manner of changing the superior thirds or discords, called falses by change, and their resolutions from one to another part.

The second part of the first chorus makes in the second measure the third, which is A to the fundamental bass, and in the same second measure, marked thus (A *); descend from the third A in G, making the ninth to the same bass, which ninth is resolved into the fifth to the bass in the following measure. The second part of the second chorus in the same second measure, whose first note is G, ninth to the fundamental bass of the second chorus, and in the second time of the same measure, also marked thus (A *), ascends to the note A, resolving the ninth into the third to the same note of the bass of the second chorus: By this means the two second parts of the first and second chorus change each other their sounds, and notwithstanding this change, both continuing the same combination to the bass. The third part of the first chorus in the second measure, is in the Note F, which is the octave of the bass in the same first chorus, and this octave prepares the seventh in the second note of the same measure, marked (*); and the third part in the second chorus in the same second measure, which also is marked (B *), has the note E, which is the seventh to its bass, which seventh is immediately resolved in the same measure by ascending to F the ^{first} octave of the bass, with the second note of the same measure: These two parts of the ^{first} second chorus change also their notes, without changing the compound combination of their bass; only that the bass of the first chorus has the simple combination in the first note of the measure, and the compound in the second note of the same measure: On the contrary, the second bass of the second chorus hath its compound combination in the first note of the measure, and the simple in the second note of the same measure, which difference changes not the order of the harmony, the total combination being still continued notwithstanding the above change.

C H A P. II.

Of the Progression by the imperfect Consonant Skip of the Guide, with all its Combinations; and first with the Consonant Combination.

ARTICLE I.

N this natural and simple progression of the imperfect consonant skip of guide, described in this chapter, the bass from the principal note of the natural scale C, ascends to the fifth note G, which is its fundamental guide, but immediately the same note G changes the quality of guide, becoming the principal note of its own relative scale, because it ascends successively to the note D, which is its fifth note, and consequently its relative guide; and by ascending the scale with the progression of the same imperfect consonant skip of guide, the harmony passes successively through all the divers guides of the scales relative to the first principal scale, preventing by this manner the final cadence, and by this means deceiving the expectation of the ear. The bass, by this progression, ascends the scale, together with its two consonant notes, the fifth and octave, also with the compound harmony; but the simple combination descends in contrary motion of the bass, and of the consonant, and compound combination; which proceeding is the opposite of the proceeding by the perfect skip of cadence, by which the bass, joined with the consonant, on compound combination, descends the scale, and the simple ascends the scale on the contrary motion of the bass. In this progression of the guide, the harmony can only proceed to the note E, because the following note of this progression is the note B, which is deprived of its consonant fifth in the natural scale, having the false fifth, which cannot be prepared in the antecedent combination of this progression. This is the first reason which shews the imperfection of the same imperfect consonant motion, or skip of guide; and another reason is, that it cannot be compounded immediately with the two first superior thirds, the seventh and ninth, because they cannot be prepared in the antecedent combination, which seventh and ninth, being the nearest discord to the principal note of the scale, consequently are the properest sounds of the compound combination.

CANON XIX. PLATE 24.

THIS canon has the octave, which ascends to the fifth in the next note, and the fifth keeping firm in the next measure, is changed into the octave, proceeding in this manner all along the canon, ascending with the bass, without passing the note E, for the reason above-mentioned.

ARTICLE II. *Of the simple Harmonic Combination.*

CANON XX. PLATE 24.

THE progression in this canon differs from that of the antecedent canon, (as mentioned above) in which the two consonant parts ascend with the bass, but in this canon the parts all descend contrary to the bass. The combination differs from that of the second canon of the antecedent chapter; in which second canon, by the motion of the perfect consonant skip of cadence, the fifth ascends to the third; this passes ascending to the octave, and this keeping firm, is changed into the fifth; but in this progression of the imperfect consonant skip of guide, the octave must descend to the third, and the third descends

descends to the fifth; this fifth resting firm, is changed into the octave, by the motion of the bass.

CANON XXI. PLATE 24.

THIS canon shews the manner of doubling the two consonant notes, the fifth and octave, which is done in the same manner as the third canon, that is, by joining the consonant combination of canon xix. with the following canon xx. becoming a composition of six parts.

ARTICLE III. *Of the Compound Combination.*

CANONS XXII, XXIII. PLATES 24, 25.

IN this progression there cannot be introduced the seventh and ninth, these not being comprehended in the antecedent combination, as mentioned before; but instead of the seventh and ninth, may be added the two superior thirds, the eleventh and thirteenth, commonly called the fourth and sixth, which being far distant from the simple combination, are considered as discords; therefore these two sounds, being part of the preceding combination, may subsist in the following combination, as in the two canons xxii. and xxiii.

The canon xxii. shews the manner of introducing the eleventh or fourth with the fifth, the eleventh being prepared in the octave, and resolved into the third in the same measure. The canon xxiii. shews the preparation and resolution of the thirteenth or sixteenth, joined with the eleventh, as it is expressed in the canon. In this sort of fundamental combination, the notes of the bass, and of the parts, must all be doubled, because the resolution of those discords must be done to the same note of the bass, which is the same note as the first, and becomes a principal relative, which ascending to the fifth in the next measure, the bass passes into its following relative guide, the same order continuing in all the progression of this canon. These falses in both these canons are properly falses of postpositions.

ARTICLE IV. *Of the Anticipations.*

CANONS XXIV, XXV. PLATE 25.

THE anticipation in this progression arises from the seventh to the third, as in canon xxiv. and from the ninth the anticipation of the fifth, as in canon xxv. The seventh is prepared by descending from the octave in the same measure, and afterwards it is resolved by the motion of the bass into the third. The ninth is also prepared in descending from the third in the same measure; and in the next measure it is resolved into the fifth, by the motion of the bass. The first of these two canons has only the combination of the seventh, and the second canon is combined with both the seventh and the ninth; the seventh is the anticipation of the third, and the ninth to the fifth, as it is clearly described in the above canons.

N. B. Besides what has been said in the second note, after canon xvii. at the end of the article VI. chap. I. of this book, it must be observed, that these anticipations are resolved contrary to the rule of resolutions, which is, that the discord or falses must be resolved by the same parts, which makes the same falses in syncopating, or moving. This general rule has some exceptions, but these exceptions seem not applicable to the anticipations in this progression of the present imperfect consonant skip of guide; therefore the best way is never to make use of them.

C H A P. III.

Of the perfect Auxiliar Skip of a Third low.

ARTICLE I.

HE perfect consonant skip of cadence, by its proper motion, cannot gradually ascend the scale; but by the help of this harmonic auxiliar skip of a third low, it may ascend continually by tones and semitones.

CANON XXVI. PLATE 26.

THIS canon only shews, that this perfect auxiliar harmonic skip is not properly fundamental in continual progression, but derived from the perfect consonant skip of cadence, to which it is particularly subordinate, notwithstanding it bears all fundamental combination, as its true fundamental bass, which appears by the following canons.

ARTICLE II. *Of the Simple Combination to the supposed fundamental Bass, which Combination is compounded in the true fundamental Bass.*

CANONS XXVII, XXVIII, XXIX, XXX. PLATES 26, 27.

THE following four canons have every one two basses; the first, which is the supposed fundamental bass, descends continually by thirds, but the lowest is the true one.

The canon xxvii. is with simple combination to the supposed fundamental bass, but the same combination becomes compound to the true fundamental bass, because the note which makes the fifth to the first bass, is the seventh to the second, the very fundamental bass; and this seventh is resolved into the octave, by ascending to the same note of the second bass, its octave; which octave keeping firm, it changes into the third of the supposed fundamental bass, but is the fifth to the true fundamental bass. This manner of resolving the seventh, in ascending to the octave of the bass, is always good, as mentioned in the explanation of canon xii. plate 21.

The canon xxviii. shews the rule for adding the seventh to the supposed fundamental bass, which seventh is the ninth to the true fundamental with its resolution in descending; the resolution of the seventh into the octave, is a resolution by supposition, because the seventh is in the place of the ninth to the true fundamental bass, and this resolution into the octave in descending together with the supposed bass, passes for good, for being the proper resolution of the ninth, notwithstanding that the first bass descending a third in the same time that the part descends a second, the same bass must necessarily proceed by two octaves, not explicit, but implicit: Moreover the same resolution is not only supported, as being by supposition, but also because the combination of the sounds is complete, in which the two Octaves, or two fifths following each other, are considered as double parts.

In canon xxix. the first bass has the seventh and octave combined in the first notes of the second and the following measure, and the seventh and ninth to the second note of the same measure; but the two notes in every measure of the fundamental bass being the same notes, they have continually the combination of the seventh and ninth. The derivation of these falses, and their resolutions, appear very clearly by their canons. The supposed fundamental bass descending a third, and the part which gives the seventh keeping firm the same note all the measure, the same seventh is changed into the ninth in the second part of the same measure by the motion of the supposed fundamental bass; as likewise the fifth

fifth into the seventh, and the third into the fifth; therefore both the notes of the measure, being part of the proper combination to the same bass, consequently the first notes of every measure are falses of supposition, which by the motion of the same bass in the same measure are changed into the proper fundamental falses in the second notes, which after are resolved by supposition of the supposed fundamental bass with the first note of the following measure, as it is clearly apparent in the canon.

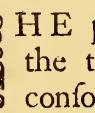
The canon xxx. has the resolutions of all the compound combination in ascending, before the fundamental bass moves; consequently in the supposed fundamental bass all the falses and their resolutions are by supposition.

N.B. The resolution of the ninth ascending a full tone to the true fundamental bass, becomes a little harsh, as its proper resolution is in descending to the octave, which is its principal note; therefore the resolution of the ninth ascending, when the ~~true~~ fundamental basses subsist, must only be used in full harmony, where all the notes are doubled and tripled.

C H A P. IV.

Of the perfect Auxiliar Skip of Third low joined with the perfect Consonant Skip of Cadence.

A R T I C L E I.

 **H**E perfect auxiliar harmonic skip becomes fundamental, when it is followed by  the two consonant perfect and imperfect skips, but properly with the perfect consonant skip of Cadence, which is the subject of this article.

C A N O N XXXI. PLATE 27.¹

THE bass in this canon descending by its first motion a third in the second part of the measure, becomes the relative guide to the following note in the next measure, to which following note in the next measure it moves with the fundamental skip of cadence. The octave, and the third in the second and third parts, keeping firm all the measure, are changed, the octave into the third, and the third into the fifth, by the second note of the bass in the same measure, and in the next measure the fifth ascends to the third, and the third in the lower part ascends to the octave. The first part, which begins with the fifth to the bass, passes to the octave in the same measure; and the octave in the next measure is changed into the fifth by the motion of the bass.

N.B. It must be observed in these canons, that as the progression of the bass is made with different skips, consequently the combinations must be different. In the auxiliar skip the octaves and the third keep firm, and in the consonant skip of cadence the third passes into the octave, the octave is changed into the fifth, and the fifth ascends to the third, as has been shewn in the canons of the progression of the same perfect skip of cadence in the first chapter.

ARTICLE II. *Of the Compound Combination to the same Progression.*

CANONS XXXII, XXXIII, XXXIV. PLATES 27, 28.

THE principal thing to be observed in these three canons is the manner of preparing and resolving the superior thirds or discords, which manner differs in the auxiliar skip from that of the consonant skip of cadence, as above-mentioned. In the skip of cadence the seventh is always prepared by the third, and resolved into the third, as may be seen in the canons of the third article, chap. I. But when the bass skips a third low, or a sixth high, as in the canons of this second article, the fifth keeping firm, prepares and becomes the seventh, which is resolved into the third, because the bass then moves with the skip of cadence; but when the same seventh is prepared by the third in the skip of cadence, as in canon xxxiii. the same seventh becomes the ninth by the bass note falling a third, which ninth is resolved into a fifth by the skip of cadence, according to the rules for the resolutions in the same skip. Likewise the ninth when prepared by the fifth in the skip of cadence, instead of being resolved into the fifth, it is resolved into the third by the auxiliar skip: Also the seventh, when it is not joined with the ninth, is resolved into the octave by the same auxiliar skip, as in canon xxxii. In the same canon xxxii. is the rule for joining the seventh with the octave; and in canon xxxiii. is shewn the rule for joining the seventh with the ninth only in the skip of cadence; and in the following canon xxxiv. is the rule for joining the seventh and ninth to both the skips of the progression in the compound combination of eight real parts, which is made by joining the canon xxxi. with any one of the two following canons.

C H A P. V.

Of the same Harmonic Skip joined with the imperfect Consonant Skip of Guide.

CANONS XXXV, XXXVI. PLATE 28.

THE canon xxxv. shews, that this skip, joined with the skip of guide, cannot be continued, but only for a few measures, because the note B has not its perfect fifth in simple and natural progression; and the canon xxxvi. shews, that the perfect auxiliar skip is improper with the skip of guide, because there is another better fundamental bass, which is the properst fundamental; therefore it is evident, that this harmonic skip a third low, or a sixth high, can only properly be joined with the perfect consonant skip of cadence, from whence it derives, and to which it is its proper auxiliar skip.

C H A P. VI.

Of the imperfect Auxiliar Harmonic Skip of a Third high,
or a Sixth low, in continual Progression.

CANONS XXXVII, XXXVIII. PLATE 29.

HE lower bass is added to both these two canons, in order to shew, that the first bass, which ascends by thirds, is not fundamental, but derived from the imperfect consonant skip of guide, by which skip of guide the lower true fundamental bass moves, notwithstanding that the first bass, which proceeds by the perfect auxiliar skip, may be treated as fundamental, namely, joined with the fundamental combination of sounds, but cannot be long continued in simple and natural progression, for the imperfect fifth to the note B.

In canon xxxvii. the third part, which begins with the octave to the bass notes, descends in the same measure, and gives the fifth to the second note of the first supposed fundamental bass, which skips a third high, which fifth is the seventh to the lower true fundamental bass; and this seventh, which is the fifth to the first bass, supposed fundamental (as above-mentioned) properly is an anticipation of the third, in the next measure to both the basses. Also in canon xxxviii. the seventh to the supposed fundamental bass, which is the ninth to the lower true fundamental bass, is an anticipation to the fifth, in the next measure; and really every note in both these two canons, are all anticipations, and very disagreeable to the ear; and if they can be suffered, must be only in quick movements, as passing notes.

Of the same Auxiliar Skip, joined with the perfect Skip of Cadence.

CANONS XXXIX, XL, XLI. PLATES 29, 30.

THE canon xxxix. is with simple combination, and the canon xl. with the compound combination, which combinations are sufficiently explained by looking on the said canons.

The canon xli. shews, that the other two antecedent canons are improper, and consequently cannot give any pleasure, having the same improper foundation.

N. B. It must be observed, that in this progression of the first note of the bass, skipping a third high to the second note in the same measure, the combination passes by the guide, with the skip of cadence, into the first notes of the following measures, consequently all the first notes of each measure may be considered as principal, and the second notes of the same measure, as relative guides; and as all these principal first notes are distant a third between themselves, in descending a third low, the progression becomes improper, because it cannot be fundamental, as has been demonstrated by canon xxvi. with this difference, that the progression in the said canon xxvi. descends directly and successively by thirds, and the proper foundation of the same progression is the simple natural skip of cadence; but in this present canon, as in the two antecedent canons, the progression being made by two different skips, consequently its true fundamental bass must be different from that of the said 26th canon, as it is in this canon; from which it appears, that the three following notes descending by thirds, notwithstanding they are joined with another skip, cannot be all fundamental, but one or two; the fundamental bass cannot constantly subsist in a like progression, as it appears in the two above canons xxxix, and xl.

C H A P. VII.

The same Auxiliar Skip joined with the Skip of Guide.

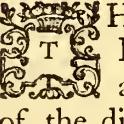
CANON XLII. PLATE 30.

 HIS canon is added here to demonstrate, that the progression of the imperfect auxiliar skip, joined with the imperfect consonant skip of guide, is improper for many reasons; the first is, that in the course of the progression, the harmony will fall upon the note B, the false fifth of which cannot be prepared; secondly, that all the first notes of every measure passing by the second skip of guide into the first note of the following measure, only distant a second below the first note of the antecedent measure, and because, that the same progression may more properly be made by the simple process of the perfect consonant skip of cadence, in which process the false fifth to the note B, is prepared, as has been explained in the first and second canons of chapter I. consequently the skip of third high, joined with the skip of guide, becomes unnatural, and improper in its progression; therefore, from what has been said, this skip of third high, joined with the skip of guide, is of little use in simple, natural progression; and it must be used with moderation upon some occasions, but never in continued progression.

C H A P. VIII.

Of the divers Combinations to the simple and natural Progression, with all the four Skips of the fundamental Bass.

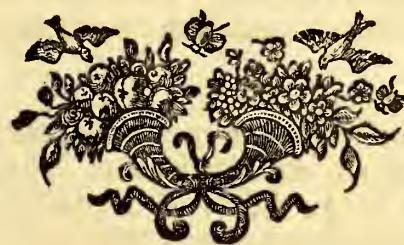
CANONS XLIII, XLIV, XLV. PLATES 31, 32.

 HESE three canons contained in this last chapter of the first part of this Harmonic Code, are composed by the four fundamental skips, the two consonant, and the two harmonic auxiliar; consequently the preparations, and the resolutions of the discords become different, every one being relative to its particular skip of the bass, as has been explained in their respective canons.

The canon xlvi. is in simple combination, and the xlvith in compound. The canon xlvi. shews the manner of introducing the full combination, according to the particular rules to every fundamental skip. To the same last canon xlvi. of full combination, is put under the first bass, a second bass; the first is the fundamental bass of progression, the second is the fundamental, stable, and immoveable bass, which has in its first note the principal note of the scale, joined with its fifth, which is its fundamental stable guide, into which it passes immediately with the following note in the next measure, and continues firm to the last measure, in which it resolves, returning in the first note of the scale, which is the principal stable foundation of the same scale, as has been explained in chapter IV. article I. first book. In the first measure of the same canon, the bass has the first principal fundamental note of the scale, which has its fifth joined above it; in the second measure it passes directly, joining its fifth, which is its fundamental stable guide, at the same time that the superior fundamental bass of progression, moving with the skip of cadence, passes to the note F, which is the subprincipal relative of the scale natural: These two different motions happening at the same time, may at first sight be supposed a discord, because the note F was not in the antecedent combination, but was the note G, as fifth, and fundamental guide, which as simple fifth was joined in the first measure to its principal, which, as before said, becomes,

becomes, in the second measure, the stable fundamental guide, which by the same note in the first measure, upon the same bass, prepares the note F, in which the first bass of progression has passed; also its third, which becomes the ninth to the under bass stable; and in regard of the other superior thirds to the same note F, as the fifth and seventh, which are also prepared by the antecedent combination; these become the eleventh and thirteenth to the stable fundamental bass, which in this manner has the full combination of the seventh, ninth, eleventh and thirteenth, as is expressed in the canon. The following measure, in which the fundamental bass of progression passes to the note D, with the compound combination of 3, 4, 5, 6, 7, 8, 9, the combination of the stable fundamental bass is augmented with the fifth, which properly is the twelfth; and in the following fourth measure, where both basses are united, both have the same full combination, which is resolved into the simple combination in the next measure, passing with the same simple combination into the final note of the cadence. From this canon it appears, that the fundamental seventh sometimes may be used without apparent preparation in final cadences, supposing the principal note doubled; but in this case the harmony must be complete, consequently it cannot be used in less than four parts. The other seventh, which is not fundamental, but relative, must be always prepared.

Here is the end of the explanation of the canons relative to all sorts of combination of sounds belonging to the simple and natural progression; therefore we shall pass to the second part, which contains in its canons all the laws and rules of the combination of sounds belonging to the mixed and varied progression in its successive order, and shewing the proper manner of transposing the two principal scales, natural and artificial, in every semi-tone of the scales of transposition.



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HARMONIC CODE.

PART II.



N the first part of the Harmonic Code has been shewn all the laws and rules of all possible combinations of sounds belonging to every one of the fundamental motions of the bass in the simple and natural progression, through all the eight original sounds. And in this second part will be shewn the same laws and rules of every combination of sounds belonging to all the same different fundamental motions of the bass, but in mixed and varied progression, namely, the bass passing through all the thirteen sounds of the scale of transposition.

First N. B. In the mixed progression all transposed scales become principal of their own scale, consequently every one has its seven relative scales, in which the progression may pass at pleasure with its proper harmony.

Second N. B. The sounds of the transposed scales must be in the same order of the principal scale, from which they are derived; if derived from the natural scale, the third must be major, the fourth, fifth, and octave, all perfect; and the sixth, seventh, and ninth all major; the seventh to the guide, which in general must be flat, but on some occasions may be major, and the transposed scales from the artificial scale, the third must be minor, the fourth, fifth, and octave, all perfect; the sixth and seventh in descending the scale must be flat, but both sharp in ascending; the seventh to the fundamental guide must be flat, as also the ninth, but on some occasions the ninth may be used sharp, as will appear from the canons.

Third N. B. The best and most pleasant manner of compositions, is not only derived from the perfect knowledge of all combinations of sounds, and their properest and natural progression, but also from the good taste of the composer, in regard to the just and best application of the same combinations and progressions to the different expressions, as gay, or pathetic, from which arises many particular rules; between these rules the harmony requires an easy and proper variety, by which the human sensation is extremely delighted; consequently the progression of all these canons described in the Harmonic Code, being continued all along the whole octave, in the first part, and all along the semitones in the second part, becomes improper and tiresome, and many, particularly in the second part, impracticable, because the bass moving continually with perfect fifths descending or ascending, some parts in the combination are obliged to proceed continually by full tones, contrary to the order of the gradual progression of the natural scale, which proceeds by tones and semitones; and this order must be followed in all sorts of progressions, and their combinations; therefore all these canons contained in this Harmonic Code, must be considered, not in their continual progression, but only in their separate particular progression, as only in three or four motions, having been composed all along the octave, and all along the semitones only, to shew all the particular combinations and progressions in passing from every tone and semitone to their nearer tone and semitone by the different motions or skips of the fundamental bass; and not for an example of a long progression, which must always be avoided.

C H A P. I.

Of the perfect Consonant Skip of Cadence transposing the Natural Scale into all the Semitones, with only the Consonant Combination.

ARTICLE I.

CANON XLVI. PLATE 33.

HIIS canon shews in what manner the fundamental bass, joined only with the two consonant fifth, and octave, passes through all the twelve intervals of the scale of transposition, transposing the natural scale into all the thirteen sounds of the same scale by its perfect consonant skip of cadence: By this means there arises thirteen scales, all principal; but the last being the same as the first, is excluded, twelve remaining only, which are different in their sounds, but not in the order of their intervals: The fifth note of every scale is always the fundamental guide to the same scale, and its principal note becomes also the fundamental guide to the next transposed scale, consequently the bass proceeding continually with its skip of cadence, every note must be considered as principal of their own scale and guide fundamental to the next note.

First N. B. In simple progression the bass cannot go out of the eight original sounds of the natural scale; and this is the reason that one of its fifths must be false, which is that from B to F ascending, or from F to B descending, as has been explained by the second note, at the end of article I. chap. I. of the first part; but in mixed progression, where the bass can have its perfect fifth, by using the semitones of the scale of transposition, it passes successively through all the thirteen sounds of the same scale of transposition.

Second N. B. It must be observed, that in the seventh measure of this consonant canon, the bass passes from G flat to B natural; this may be taken for a false skip of cadence, but G flat being the same sound as F sharp, both which are distant from B natural seven semitones, consequently is a perfect consonant fifth descending; also the fifth of G flat is D flat; from this D flat descending to B natural, as it is done by the superior first part of the canon, may seem a skip of a third low; but D flat being the same sound as C sharp, distant a tone from the same B, consequently it descends only a second, and not a third; also the octave of the same G flat in the second part, passing to F sharp, changes the name, but not the sound, which constitute the same. All which shews clearly, that the different denominations cannot alter the sounds, which are always the same; and also shews, that the distinction of the major and minor semitone is incompetent to the melody and harmony.

Third N. B. When in the beginning of a composition next the key, is found a dieses, in English called a sharp, this dieses, or sharp, augments a semitone all notes comprehending its octaves grave and acute, which belong to the same place where the dieses is put; and when it happens in the course of the composition to augment the same notes of another semitone higher, is put this mark (x) called improperly dieses enharmonic, but better in English, extreme sharp, as mentioned in article VIII. chap. VI. likewise the b mole, which diminishes the natural note of a semitone, when this b mole, or flat, is put at the beginning of the composition next the key, in this case, another b flat being put to the note, which has the flat at the key, the same note must be diminished another semitone; as for example, the sign b, in the place of the sound called B natural, at the key, all the notes of the

the same B natural, comprehending its octave, grave and acute, are transposed in B flat, which is a semitone lower; and when, in the progress of the composition another b mole, or flat, happens to the same b flat, this diminishes it another semitone, and becomes A natural, which is called B extreme flat, as may be found in some of the canons.

ARTICLE II. *Of the same Transposition, with the simple Harmonic Combination.*

CANON XLVII. PLATE 33.

THIS canon being in simple combination, and as the natural scale is formed with a major third, fifth and octave both perfect, so likewise in all the transposed scales, by which the bass passes, the simple combination must be in the same order with the third major, perfect fifth and octave, as in the canon.

ARTICLE III. *The same Transposition with the compound Combination of the Seventh.*

CANON XLVIII. PLATE 33.

IN the first chapter of the first part of this code, Articles iv. and vi. it has been shewn, that in the perfect consonant skip of cadence the seventh is always prepared by the third, and the ninth by the fifth, and resolved into the fifth; but as in the first part of this code the harmony proceeds only from one sound to another of the natural scale, in which the principal note, its fourth, and its fifth, have all their thirds major; and the others, as the second, third, sixth and seventh, have all their thirds minor; consequently when the fundamental bass proceeds with the skip of guide in the same natural scale, the seventh will be major, or minor, according to the antecedent third from which it is prepared; also the ninth, if the fifth by which it is prepared is false, will likewise be minor; as when the bass passes from B to E the ninth is minor, because the fifth to B is F natural, which is a false fifth from which it is prepared, and consequently the ninth being also distant a semitone from the octave, and the above preparation by the false fifth, is supported, as has been demonstrated in the second *N. B.* of the first article, first chapter, in the first part of this code. But in the mixt progression with the same skip of cadence, as all the notes which the bass passes through are principal of a new transposed scale, and at the same time fundamental guide of the next note, into the scale is successively transposed, and having, as fundamental guide the major third its indicative note, consequently this same third must prepare the following seventh, which is fundamental and indicative note, because a principal note of a new scale follows; therefore the same seventh as fundamental indicative descending, must be minor, or flat; for this reason the major third, which must serve as preparation of the above seventh in the antecedent measure, must be diminished in the next measure of a semitone, to make the flat seventh, as may be seen in this canon. But this seventh being diminished a semitone from the note by which it has been prepared, consequently it has been prepared by a different sound, the third major being not the same sound of the third minor; therefore the preparation is improper, and rigorously false, notwithstanding that this sort of preparation are supposed good by almost all the composers of music, because they make no distinction betwixt the major and the minor third, when they serve for the preparation of any discord; but a better reason is, that the major third, is the fundamental indicative ascending note, and changing from the major into a minor, it becomes the fundamental seventh, and it is changed in this manner from the indicative note ascending into the indicative descending note, and the bass note is also changed from the principal note into the fundamental guide; this kind of seventh may be supported without preparation, being fundamental.

N. B. This

N. B. This sort of combination may pass for a few measures in some pathetic expressions; but in a long progression, as in the canon, it becomes tedious and tiresome; for which reason it is better not to change the major third into a minor third for the preparation of the seventh, by which means all the notes preserve the quality of principals of their own scales; but the quality of the fundamental guide is changed into a relative guide to the next note, as it is in the following canon.

Of the same Transposition with the Seventh and Ninth, both natural, as in their respective Scales.

CANON XLIX. PLATE 34.

IN this canon because the seventh is not minor, but natural, as it is in its proper scale, consequently it is not fundamental, but only a relative guide; the ninth which is added, becomes also relative, notwithstanding it may subsist as fundamental, being the transposition of the natural scale, and the whole progression is made by perfect fifths from which they are prepared, and into which they are resolved.

Of transposing the artificial Scale with simple Accord.

CANON L. PLATE 34.

THIS canon shews the manner of transposing the artificial scale with simple combination, namely the minor third, fifth, and octave, by the above same progression; which combination must be used in every sound where the same scale may be transposed. All the notes in this canon are principal of their own scale, and at the same time guides, but relative to their succeeding note, and not fundamental, because their first third is not major, as it must be major in the combination belonging to all fundamental guides, as has been explained.

ARTICLE IV. *The same Transposition with the compound Accord of the Seventh.*

CANON LI. PLATE 34.

THIS canon wants no explication; the seventh being very well prepared by the minor third, and very well resolved into the minor third: All notes are principal of their own scale, and guides relative to the next transposed scale.

Of the same Transposition with the Ninth instead of the Octave.

CANON LII. PLATE 35.

THERE are two different ways of joining the ninth to the seventh instead of the eighth, that is, either with the major or minor ninth. It was mentioned in the sixth Chapter, Article iv. of Book I. that the artificial scale had two scales, one for ascending, the other for descending; in ascending the sixth and seventh are major in all scales transposed from the artificial; but in descending, the sixth and seventh must be minor; the major sixth in ascending belongs properly to the order of melody; because, as mentioned, the melody cannot gradually pass to the next seventh, which must necessarily be sharp to ascend to the octave of the principal note; consequently this major sixth can only belong by accident to the bass note in the fundamental guides of the artificial scales, in changing the same fundamental guides into relative guides, which fundamental guides must have the combination of the major third, fifth, and octave; and when the same accord is joined with the seventh and ninth, these must both be flat, or minor: but in this

present canon, the guide being deprived of its sharp third, which is the necessary indicative note of the successive scale, consequently it cannot be fundamental, but only relative, which relative guides are always improper in transposing the scale; and when the guide is fundamental, the fifth of the antecedent note must be diminished a semitone for the flat ninth belonging to the fundamental guide, which ninth becomes a minor second to the octave of the same guide; and this second to the octave note, or minor ninth to the bass, being done in moving both parts, consequently is not properly prepared, notwithstanding it derives from the fifth of the antecedent note, but derives from the same name, and not from the same sound. For example, the fifth to the first principal note C, as in the canon, is G natural, the bass passing into F, the same note G fifth must be diminished one semitone for the minor ninth to the bass note F, and G natural becomes flat; it is the same G, but being flat, the sound is changed, and altered one semitone: Besides the same combination of the fifth passing into the ninth proceeds always by false fifths one with another, which together become not very pleasant to the ear; for these reasons the major ninth becomes less unpleasant, being prepared by the perfect fifth without any alteration in the sounds, and in the progression the fifth and ninth move by the fourth and fifth, notwithstanding that it is always improper in a long progression, because the transposition of the scales must be done by the fundamental guides, and not by the relatives: Therefore the best way of proceeding with the combination of the ninth, in changing the scale, is in doubling all the notes of the parts and the bass; in this manner may be distinguished the principal notes from the guides, as it is done in the following canon.

N. B. Here is put only a canon with the major, or natural ninth, which canon may be easily changed in putting to every ninth a flat, to have both the canons of the two manners of employing the ninth.

ARTICLE V. Of the same Transposition in the best Manner.

CANON LIII. PLATE 35.

THIS canon shews the best manner of successively transposing the artificial scale, with and by the proper fundamental guide in compound combination with its major third, perfect fifth, seventh and ninth both flat; this must be done by doubling the notes of every part, and the bass in all the measures, as it is in the canon. The first bass note of every measure is a principal note of its own scale joined with its simple combination of minor third, fifth and octave. The second note in the same measure, which is the same as the first note, is the fundamental guide to the next principal note in the following measure; which note being transposed from the antecedent artificial scale has the same combination of the minor third, fifth and octave, proceeding in the same manner through the canon. All the first notes are principal, and the second notes of every measure all fundamental guides, with their proper compound combination of the indicative ascending major third, fifth, seventh, and the indicative descending ninth. The first part in the canon, which gives the minor third to the bass principal note, this minor third is changed in the second note of the same measure into the major third indicative of the following first principal note of the transposed scale in the next measure, in which measure the same indicative third major ascends to the octave of the principal note in the bass; and this octave descends into the seventh with the second note of the same measure; which seventh is resolved into a minor third of the next measure, and this minor third being again changed in the indicative major third, ascends as before to the octave, proceeding continually in the same manner. The second part, which gives the octave to the bass in the first measure, and in the second measure it is changed in the fifth from which it passes in the following measure to the minor third, in the second note of the same measure descends to the ninth, which is the indicative descending note of the fundamental guide of the artificial scale, and in the following measure descending a semitone it resolves into the fifth; which fifth keeping firm all the measure, in the next measure ascends to the minor third, which descending a full tone

tone passes to the ninth, as before, proceeding always in the same manner: All the others proceed also in the same manner as the above two first. By this means the simple combination belonging to the artificial, and its transposed scales, passes into the compound accord with its second note, the bass keeping firm its proper fundamental note, and the compound combination is resolved again into the simple combination in the next measure, as it clearly appears in the canon; in which are some notes with double flats, as has been mentioned in the third N. B. at the end of the first article of this chapter, to which double flats we must take care; and to avoid mistakes, the same note has been abundantly marked with a cross under the double flat note, as it is in this canon.

ARTICLE VI. *Of transposing the natural Scale with the Resolution of the Compound Combination ascending.*

CANON LIV. PLATE 36.

THIS canon is also formed by dividing the notes of every measure. The seventh arising from the third in the antecedent measure, is resolved by the second note of the measure in ascending to the octave; and the fifth prepares the ninth which is the first note in the next measure, which ninth is resolved by ascending to the third in the second note of the measure; the third prepares again the seventh as above, and as above it is resolved, proceeding always in the same manner, ascending in contrary motion to the bass.

First N. B. The seventh is properly prepared and resolved, but the ninth would be better resolved by descending to the octave, for the reason mentioned at the end of the explanation of canon xii. in the first part of this code; but in some cases it may be resolved in ascending, as in the canon.

Second N. B. In this canon all the first notes of every measure are deprived of their thirds, which are the principal harmonic sounds; and that happens from the uncommon resolution by ascending, which properly are appoggiatures, but somewhat improper, as mentioned before: Therefore this canon has been put here only to shew the manner of preparing and resolving the superior thirds (called falses) by ascending, when on some occasions it becomes necessary in compositions in five parts.

Third N. B. The same canon may be augmented to more parts in the same manner as has been done in canon xviii. which is in ten real parts in two choruses in the first part of this code, and by the addition of the parts all the compound combination will be full of the falses also of change, as in the above canon xviii.

C H A P. II.

Of transposing both the Scales, natural and artificial, by the imperfect consonant Skip of Guide in simple Combination.

CANONS LV, LVI. PLATE 36.

N simple progression this imperfect consonant skip to the guide cannot go through all the sounds of the octave, as has been shewn in the first part of this code: But in this mixt progression, as the bass may have all its perfect fifths, it may pass through all the thirteen sounds of the scale of transposition.

Canon lv. has the transposition of the natural scale; and canon lvi. has the transposition of the artificial scale; both with simple combinations. The harmony in the progression by the skip to the guide, cannot be compounded with the seventh and ninth as explained in the first part of this code, but only with the eleventh and thirteenth, or fourth and sixth, the same as in this mixed progression by the same skip; therefore when the compound combination in this progression is wanted, we must have regard to the canons, and their explanation relating to the same consonant imperfect skip in the first part of this code: The only difference between the simple progression and the mixt by the same skip, is the accidental signs sharp, or flat, to be put in their proper places, the combination being the same.

C H A P. III.

Of transposing the two Scales, by the auxiliar perfect Skip of Third low, or Sixth high, in continual Progression.

CANONS LVII, LVIII, LIX, LX. PLATES 37, 38.

T has been demonstrated in the first part of this code that the continual progression by the third low, or sixth high, which is the same, is not fundamental, but derived from the perfect consonant skip of cadence, to which it is added as auxiliar. The same it is in the mixt progression, as it is apparent by observing the true fundamental bass expressly put under the first common bass supposed fundamental in all these four canons.

Canon lvii. is properly the transposition of the natural scale by the true fundamental bass; but in regard to the supposed first bass seems the transposition of the artificial scale, because in all measures its first thirds are all minor, as being the second third, which composes the perfect fifth in the natural scale; the first third which composes the same fifth being major is occupied by the same first fundamental bass, consequently it has for its first third, the second third, which is, as abovesaid, minor.

Canon lviii. on the contrary, seems by the first common bass, that passing from the first measure to the second, it transposes the scale artificial into the natural, because descending a third low it descends in the second third, which composes the fifth, consequently it has always the first third sharp upon its first note, but the transposition is of the artificial scale the first third of the two, which composes the fifth, is minor to the combination of the fundamental

fundamental bass: Therefore it is manifest that the above auxiliar skip depends upon the consonant skip of cadence, but when it is joined with it, becomes itself fundamental, as will be seen in the following Chapter IV.

The harmony of the above two canons proceed in ascending in contrary motion to the two basses, because the harmony to the first bass is of simple combination, notwithstanding that is compound to the fundamental lower bass.

Canon lix. is the transposition of the natural scale in the manner of the canon xvii. but with the descending harmony. Also the canon lx. which is the transposition of the artificial scale with descending harmony, both these two canons, lix. and lx. proceed with the compound combination of seventh and ninth in descending with the basses.

First N. B. In the above two canons lix. and lx. the fifth prepares, and is changed into a seventh, which is resolved into the octave, in the common first bass, because it descends only by thirds; so the ninth into which the seventh is changed by the first skip in the measure of the first common bass; the same ninth into the third by the combination of the same skip of a third low by the same bass; but the same seventh in the true fundamental bass, is resolved into the third, and the ninth into the fifth, according to the rules to be observed in the progression of the consonant perfect skip of cadence.

Second N. B. The figures are marked over and under every part: The upper figures belong to the first bass, and those under the same part to the lower fundamental bass; as also in all the canons composed with two basses.

C H A P. IV.

ARTICLE I. Of the Transposition by the same auxiliar Skip, but joined with the perfect Skip of Cadence in simple Combination.

CANON LXI. PLATE 39.

N this progression the bass descends a minor third, in order to transpose the natural scale in the next note higher with the skip of cadence, by which the scale is transposed a tone higher in the next measure. The first notes of every measure may be considered as principal of a new scale, and the second notes principal, and, at the same time, relative guides to the next note.

Of the Transposition of the artificial Scale with the same Progression and Combination.

CANON LXII. PLATE 39.

THE first notes in every measure in this canon are all principal notes of the successive transposed scales from the first artificial scale; and the second notes are all fundamental guides to the following principal note of the new transposed scale. The bass skips a minor third low, in order to ascend by the following skip of cadence a full tone above the first note of the antecedent measure. By the skip of third low the octave passes to the major third in the second note of the measure, which serves as indicative note of the next scale.

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The fifth ascends to the octave, and the third, which is minor, is changed into a perfect fifth, and with this combination the first scale is transposed by the same fundamental skip of cadence a full tone higher, containing the same combination and progression, to the end of the canon.

Of the same Transposition and Progression, but the Bass skipping by major and minor Thirds in the natural way.

CANON LXIII. PLATE 39.

THIS canon is the same as the antecedent canon, being only different in the skipping low by major and minor thirds; with the skip of minor third the bass ascends a full tone, and with the major third it ascends only a semitone by the successive skip of cadence, which is always fundamental.

Of the Transposition of the natural Scale with the same Progression and Combination, but with the fundamental Guide.

CANON LXIV. PLATE 40.

THE difference betwixt this canon and canon lxi. is only in the combination of the second note of every measure, which notes in canon lxi. are all relative guides, but in this canon are all fundamental guides; consequently the octave to the first bass note must pass to the third in the second note of the same measure, as indicative of the same fundamental guide to the next transposed scale.

The Manner of transposing the artificial Scale by the same Progression and Combination, a Semitone higher.

CANON LXV. PLATE 40.

THE auxiliar skip, when it descends a major third, or ascends a minor sixth, which in combinations harmonic is the same, transposes the scale by the succeeding perfect fifth of cadence only a semitone higher. The first notes in all the measures are all principals of the new transposed scale, and the second notes all fundamental guides; the progression ascending continually by semitones.

ARTICLE II. Of the Transposition of the natural Scale by the same Progression, but with compound Combination.

CANON LXVI. PLATE 40.

THIS canon differs only in the combination from canon lxi. that has the perfect simple, this the compound combination, as is clear enough in looking on the canon.

CANONS LXVII. PLATE 41.

THIS canon also is the same as the antecedent, the difference is only in the third of the combination to the skip of cadence, which in the above canon lxvi. it is minor, and in this canon is major, as in the canon in which is the progression, and its combination, is sufficiently clear.

Of the Transposition of the artificial Scale by both the above two Skips in seven real Parts.

CANON LXVIII. PLATE 41.

THE transposition in this canon is of the artificial scale, the bass descending a minor third from the principal first note, passes with compound combination into the fundamental guide of the next transposed note by its skip of cadence, which transposed note having only the simple combination, may be considered as simple principal of terminate harmony in a new transposed scale; which principal descending into a fundamental guide for transposing again the scale, continually ascends the octave by full tones. This canon shews at the same time the manner of doubling the two consonant fifth and octave, which is done by adding the simple combination to the compound; the simple combination ascends with the bass, and the compound descends in contrary motion to the bass, as it is explained in the canon.

N. B. When the harmonic progression is continually done by the perfect consonant skip of cadence, or by the imperfect consonant skip of guide, the simple combination proceeds always in contrary motion to the fundamental bass; and on the contrary, the compound combination proceeds descending together with the bass; but the same two skips being joined with the auxiliar skip of third low, or sixth high, the simple combination goes with the bass, and the compound on contrary motion to the same bass.

ARTICLE III. *Of the same Transposition and Progression, but in Compound and full Combination in eight Parts.*

CANON LXIX. PLATE 42.

THIS canon is the same as the above lxviiith, only with this difference, that all the first notes of the measures in the same lxviiith canon, being principal notes with simple combination, consequently are all of terminate harmony: But in this canon its first notes being with compound combination becomes indeterminate harmony, and they must be considered as principal notes of indeterminate harmony, and the bass skipping continually a minor third low in the second note of the measure, which second note is the fundamental guide to the next transposed scale, to which it passes with the skip of cadence. The first scale is continually transposed a full tone higher; and the bass passes with both its skips through all the semitones of the division of the natural octave. This canon is in compound and full harmony composed by eight real parts, in which the combination of the seventh instead of resolving into the minor third in the next measure, keeps firm for the full combination, in which it is changed into the eleventh, or fourth, resolving into the perfect fifth in the second note of the same measure. If the composer will not use the full combination, the fourth must be suppressed in resolving directly the seventh into the minor third, which in the next note must be changed into a perfect fifth, by putting a sharp to the antecedent note; and if he suppresses the ninth, he must descend directly to the octave, which also must be altered with a sharp to give the major third indicative in the second note of the same measure to the fundamental bass, which is the fundamental guide to the following new trasposed scale in the next measure.

N. B. When the bass, with its consonant skip of cadence, descends continually a perfect fifth, or ascends a perfect fourth, the parts which descends with him must proceed continually by full tones, as in the canons xlvi. xlviii. xlxi. li. and lii. and when the same consonant skip of cadence is joined with its perfect auxiliar skip, descending only a minor third low, the bass ascends continually by a full tone, the parts also which ascend with him must

must ascend continually a full tone, as it is done by simple combination in canon lxi. and in compound combination only by those parts which ascends with the bass by fifths and octaves, as in canons lxii. and lxiv. by their third parts, and in canon lxviii. by its sixth part, and in this present canon lxix. by the seventh part. This progression, by ascending or descending continually, ^{by fifths}, is contrary to the convenience of the voice, and to the order of the two scales natural and artificial, which both proceed by tones and semitones: Therefore all progressions which ascend or descend continually a full tone, cannot be used in a long and successive progression, as has been mentioned in the *third N.B.* at the beginning of this second part; and in regard to the auxiliar skips, the best way of using them is descending or ascending, by skipping sometimes by minor thirds and sometimes by major thirds, as it is proper to the scales in which the harmony proceeds.

C H A P. V.

ARTICLE I. Of transposing the natural Scale by the same auxiliar Skip of Third low, joined with the imperfect Skip to the Guide.

CANON LXX. PLATE 42.

IN this canon the bass descending a minor third low with the auxiliar skip, and afterwards ascending by the skip of guide, transposes the scale a major third higher; therefore cannot pass through all the sounds of the octave, to which it rises in three skips of guide; the octave being equally divided by three major thirds. This progression can only serve for transposing the scale only one time, and very seldom for two, but never for three times successively, as in the canon.

ARTICLE II. *Of the Transposition of both the natural and artificial Scales, as they happen in their Order, by the two joined Skips as above.*

CANON LXXI. PLATE 43.

IN this canon, by the two motions of the bass, the harmony passes successively all the sounds of both the ascending and descending scales of transposition; successively transposing the natural and artificial scales a major or a minor third high, which is done by the bass descending continually a perfect fifth from the third note of the first principal note, and afterwards ascending a perfect fifth; which third note of the principal note, when it is minor, as in the first measure by the successive skip of the perfect fifth, transposes the scale in the same minor third; and when the third of the transposed scale is major by the same successive skip of the perfect fifth, transposes the scale a major third higher, as is apparent in the present canon: By this means the harmony passes through all the twenty-five sounds, divided by twenty-four semitones of both the ascending and descending scales of transposition, proceeding always by major or minor third (as the perfect fifth of the antecedent scale requires) combined with its perfect fifth and seventh to the skip of the fifth in the second note of the measure, and third, fifth, and octave, to the principal first note.

C H A P. VI.

ARTICLE I. Of Transpositions by the imperfect Skip auxiliar of the Third high, joined with the consonant Skip of Cadence.

CANON LXXII. PLATE 44.

HESE imperfect auxiliar skips of third high or sixth low, are always improper in simple and mixt progression by succession, as it is apparent by the canons of this chapter; in which canons the ill proceedings of the parts cannot be avoided; besides, this same skip in a continual progression cannot be fundamental, as has been explained by canon xli. therefore it can only be once used as fundamental; and, as has been mentioned in the *third N. B.* at the beginning of this second part of the code, all the canons in this same second part are made to shew the manner of transposing the scales by all the skips of the fundamental bass, with their proper but different combination of sounds. This canon lxxii. is of simple combination, the bass ascending by major and minor thirds with the auxiliar skip, and descending and transposing the scale a major or minor third low with the perfect fifth of the skip of guide. The first notes may be considered as principal in their own scales, and the second following notes in its same measure as fundamental guides to their next transposed scales.

ARTICLE II. *The Transposition with compound Harmony.*

CANONS LXXIII, LXXIV. PLATE 44.

THES two canons are the same, only the parts are disposed in a different order, to shew the manner of changing the places of the same parts. Both canons are compounded with the seventh, which may seem as not prepared, being prepared by supposition; because the part which begins giving the third to the bass, descends a full tone to give the seventh to the next bass note: Therefore this same bass note, notwithstanding it has not been in the antecedent measure the first principal note, but only its third, which by the transposition is changed into principal, consequently the seventh is prepared by the same which has subsisted in the antecedent accord; moreover, being a fundamental seventh, it may on this occasion subsist without preparation, resolving the third into the next measure.

CANONS LXXV, LXXVI. PLATE 45.

IN canon lxxv. the bass ascending a major third transposes the natural scale a minor third low by the skip of cadence, and proceeding in the same manner it divides the scale in four parts, because the octave contains only four minor thirds, and no more. But the bass ascending a minor third, and afterwards descending a perfect fifth with the skip of cadence, descends always a major third; and by this manner it divides the octave in three equal parts, as has been done in canon lxx. but in contrary progression.

C H A P. VII.

ARTICLE I. Of the Transposition of the same Skip joined with the Skip of Guide.

CANONS LXXVII, LXXVIII. PLATE 46.



N canon lxxvii. the bass rises a natural third, in order to descend with the skip of guide a perfect fourth low, which is the same as ascending a perfect fifth high.

Canon lxxviii. ascends a minor third, and afterwards descends in like manner a perfect fourth. In this canon the third part descends continually a full tone contrary to the convenience of the voice, and the bass passes through the octave by only six intervals of a full tone, two semitones being omitted contrary to the order of the scale; consequently the continual progression, as in the canon, cannot well subsist.

Of transposing the natural Scale by the same auxiliar Skip ascending a major Third, joined with the same Skip of Guide.

CANON LXXIX. PLATE 46.

THIS canon shews the manner of transposing the natural scale a semitone lower, and this is done by the bass ascending a major third, and then descending a perfect fourth, into which the antecedent scale is transposed, and by the same progression the harmony passes through all the semitones of the octave, as is clearly expressed in the canon.



C H A P. VIII.

Of the Transposition of both the natural and artificial Scales, proceeding by all the fundamental and auxiliar Skips in compound Combination.

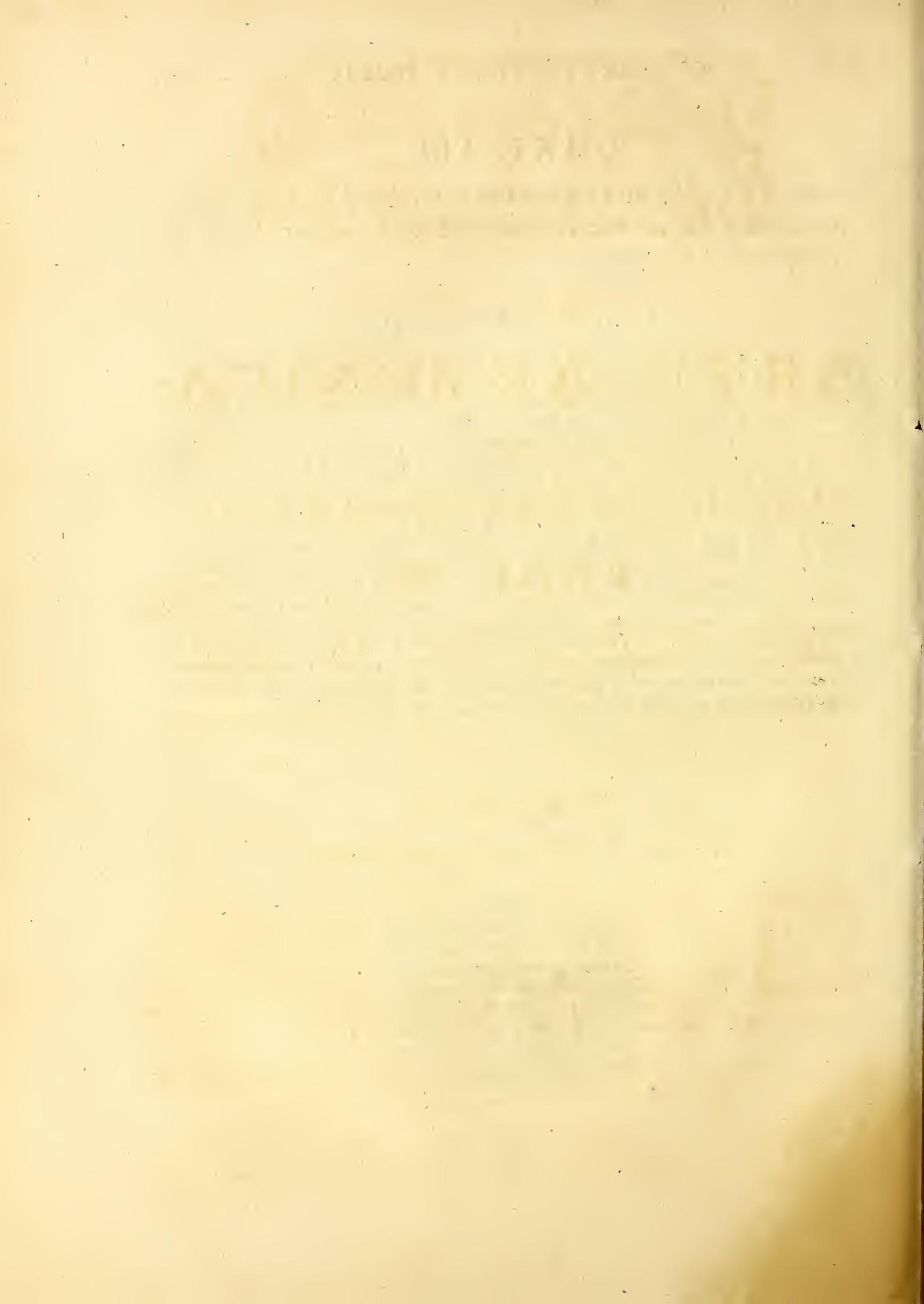
CANON LXXX. PLATE 46.

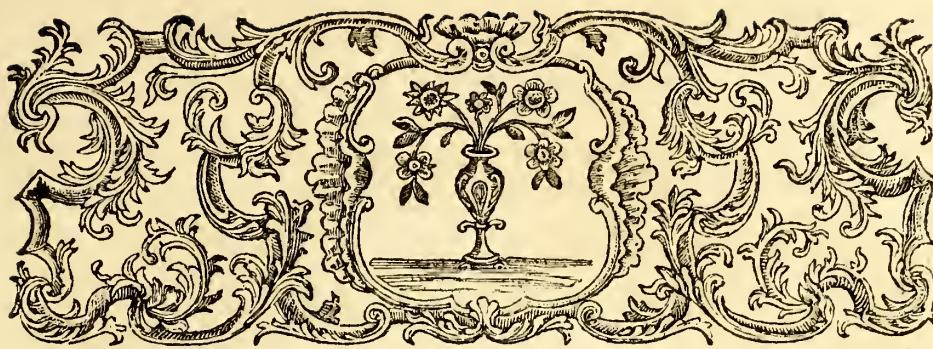
N this last canon the harmony, which is compound, proceeds with all the fundamental motions in transposing the two principal scales. The first notes form the principal simple combination of the natural scale; which combination is changed into compound, by descending the third part from the octave into the indicative seventh, at the same time of descending the bass into its proper octave; which octave is also changed from the principal of the scale into the fundamental guide, by which it transposes the scale into F, and by descending by the auxiliar skip of third low, it passes to G and to A, from which changing the skip of third low into the skip of third high, it returns into the first natural scale of C, passing after to G, returning again to C, which becomes the relative guide to F; and from F descending to D, relative guide of G, passes to the same G as relative principal of indeterminate harmony; but by descending in its octave, becomes the fundamental principal guide of the first natural scale, and the first notes in every measure are all principals of indeterminate harmony; and the second notes all guides to the next notes. All preparations and resolutions are relative to the particular motions of the bass, explained in their particular canons. Here ends the harmonic code, in which have been explained all the fundamental laws and rules belonging to the composition of music. Now we shall pass on to examine the relation and application of the same fundamental laws and rules to the figurate harmony, or common composition of music, in the following book.

E N D of B o o k II.



D E L L'





D E L L'
A R T E A R M O N I C A :
O R,

A T R E A T I S E of the C O M P O S I T I O N of M U S I C.

B O O K III.

Containing the Figurate Harmony; its Difference from the Fundamental; and the diverse Motions of the Bass, and Parts, with the Diminutions of the fundamental Notes; also its different Compositions and Divisions; with their particular Laws and Rules, over and above the Harmonic Laws.

C H A P. I.

ARTICLE I. Of the Figured Harmony.



FIGURED harmony is the usual and common music, which may be composed in two, three, four, to sixteen or more parts or voices, with or without instruments. It is called figured music by musicians, because different figures are made use of, with variety to time and measure at pleasure; consequently it differs from the fundamental harmony, not only in the diversity of figures and time, but also in the combination of sounds, which becomes inverted by the arbitrary motions of the bass, and of the parts.

ARTICLE II. *Of the different Situation of the Bass in figured Music, by which the fundamental Combinations are inverted.*

FUNDAMENTAL harmony is a composition only harmonic, without any sort of melody, having the notes all equal, and the motions of the bass and parts all limited, otherways it would be impossible to shew, in a proper order, the original rules of combination and progression

progression of sounds. But the figured harmony being almost always joined with some particular melody, and as the melody arises directly from nature, being the product of the natural genius of the composer, it cannot be limited to any particular movements, but only to those which arise from its being joined by and proceeding with the harmony; and as the melody is the principal object in figured music, in which it may be introduced into any one of the parts, and bass, therefore the parts and bass must follow the melody according to its different notes, movement, and time; consequently the bass, and the parts, by following or repeating the subject of the melody, cannot always proceed in a fundamental manner; and because the harmonic combinations are adapted and calculated to the divers distances, or, as commonly called, intervals, betwixt the parts and the bass, when the bass is not in the fundamental place, the combination of sounds becomes less or more inverted, as the same bass is far or near its fundamental place, as may distinctly be seen in the examples 1, 2, 3, 4, and 5. plate 47.

The first example is of simple fundamental combination: It is divided into three parts; the first division shews the fundamental simple combination to the principal note of the natural scale C, occupied by the bass; the upper parts composing the same simple accord of 3d, 5th, and 8th, and the octaves of the 3d and 5th. The second division shews the first inversion of the same simple accord, which happens when the bass occupies the third note of the simple fundamental accord, which is inverted in the 3d, 6th, and 8th; the 3d of this inverted combination arises from the fundamental 5th, the 6th from the fundamental octave, and the 8th is the 8th of the fundamental 3d, occupied by the bass. In the third division, the bass being in the place of the fundamental fifth note, the combination fundamental is inverted, and becomes the accord of 4th, 6th, and 8th.

N. B. This simple fundamental combination ~~ever~~ has no more inversion than the two above-mentioned.

The 2d, 3d, and 4th examples are of compound combination to the note G, which is the fundamental guide to the principal note of the natural scale.

The second example is divided into four parts; the first division has the fundamental accord 3d, 5th, 7th, and 8th. In the second division the bass being in the 3d of the fundamental accord, it becomes inverted into the 3d, 5th, and 6th. In the third division the bass is placed in the fundamental fifth, and the combination or accord is inverted into the 3d, 4th, and 6th. In the last division, the bass being in the fundamental seventh, the fundamental accord is inverted and changed into the 2d, 4th, and 6th.

The third example shews the compound combination of the 3d, 5th, 7th, and 9th, without the octave, and is divided into five parts. By the first division is described the fundamental compound combination of the 3d, 5th, 7th, and 9th. In the second division, the bass being in the third note of the fundamental combination, this same combination is inverted into the 3d, 5th, and 7th; the 3d of this inverted accord is the 5th in the fundamental, and the 5th and 7th are the 7th and 9th of the same fundamental accord. The fundamental combination is inverted in the third division into the combination of the 3d, 5th, and 6th, the bass being in the fundamental 5th. In the fourth division the bass is in the fundamental 7th, and the inversion is 3d, 4th, and 6th. The fifth division being the bass in the fundamental ninth, the inversion becomes 2d, 4th, and 6th.

The fourth example is compounded with the addition of the octave to the 7th and 9th, and is also divided into five parts. The first division contains the fundamental combination of 3d, 5th, 7th, 8th, and 9th; in the second division, the bass being in the fundamental third, the inversion is 3d, 5th, 6th, and 7th. The third division has the bass in the fundamental fifth note, and the inversion becomes 3d, 4th, 5th, and 6th. In the fourth division, the bass being in the fundamental 7th, the fundamental combination is inverted

inverted into the 2d, 3d, 4th, and 6th; and in the last division, the bass being in the ninth fundamental, the inversion is 2d, 4th, 6th, and 7th. These four examples, as they are explained, shew all the general inversion of the fundamental simple and compound combination of sounds in the natural scale, which may serve also as examples for all the other scales.

The fifth example is in full combination, as being composed by the eight original sounds disposed by thirds, which may be infinitely protracted; consequently the inversion cannot always be apparent, because in whatsoever note of the fundamental true accord the bass is, it has a like accord disposed in the same order by successive thirds, as is to be seen in example v. plate 47. Therefore it may appear difficult to distinguish the fundamental true bass from the common, both having the same accord: But in observing the movement and situation of the bass, is easily known the true fundamental. The fundamental bass cannot proceed by conjoint degree, but by its consonant and auxiliar skips; consequently when it moves by conjoint degree, only one of the two joined notes can be fundamental. For supposing the bass in the note C passing into the nearer note D, if C is fundamental, D cannot be fundamental, but only one of the notes belonging to the simple fundamental accord of its two consonant or two auxiliar skips. In the consonant simple accord of C, as principal, it cannot subsist, nor in its two auxiliar skips of 3d low and high: The skip of 3d low from C is A, and the skip of 3d high is E, to which D cannot be 3d, 5th, or 8th; consequently it is apparent, that it can only belong to the other consonant skip of 5th high or 4th low, which is G guide to the above principal C, and D is the fifth note of the same guide G. But if D is the fundamental note, C can only be the third note of A; which A is the relative guide to D, and by the order of the antecedent and following progression of the same bass notes, is known which of the two joined notes is the true fundamental. The same must be observed in regard to the two auxiliar skips of third high or low. When the bass proceeds by thirds, only two can be fundamental; for example, the bass descending from C to A, and successively from A to F, both C and A may be fundamental notes; C as principal, descending in A by its descending auxiliar skip, which may be the relative guide to the note D; in this case the following note F, into which the bass descends from A, as above, can only be the third of the simple combination belonging to the same D its principal relative note; and being fundamental C and F, the note A can only be the third to the note F as principal, and C as relative, or fundamental Guide. The same happens with the other auxiliar skip, as has been demonstrated by the canons of the harmonic code relating to the same two auxiliar skips, where has been shewn, that the bass, as fundamental, can only proceed with one skip of third, but following another skip of third, must be joined by one of the two consonant skips, which properly are only the two true principal skips fundamental.

N. B. The inversion of the eleventh note of the fundamental accord has been omitted in this article, but it will be explained in the following fifth article.

ARTICLE III. *Of the Inversions by the Bass Syncopes.*

IT has been mentioned in the first article of this present book, that the common bass is not always in the fundamental place, but very often in the place of one or another of the superior parts; and that happens when the bass has occasion to imitate or contrast some proposed melody, or to fill the harmony, or some other purposes as may serve the genius of the composer; which is the cause that the fundamental notes are changed, many in syncopes, many in simple or double, but different notes, and many other in diminished notes. Syncopes, which is the subject matter of this article, is so called when two notes are tied together as if they were only one, as is to be seen in example vi. plate 48. This example is divided into two parts, the first part contains in general the second part, but particularly the two extreme staves, namely the upper extreme staff, keeping in the notes which gives the simple combination to the fundamental bass in the low extreme staff; and also the same

same notes serve to the diverse combinations with the six basses contained in the second division subdivided in three parts, every one having two basses proceeding one after another, the first subdivision containing the basses 1. and 2. gives to the bass fundamental, alternatively, the fifth and octave, doubling the same notes of the superior notes. In the second division both basses gives alternatively the ninth, and the two last in the third sub-division the seventh. The two basses in the first sub-division skip from the first note one octave higher for passing into the fifth: The other two, in the second sub-division, skip a fifth higher, by which is prepared the ninth; and the other two, in the last sub-division, arise a third high, preparing the seventh to the fundamental bass; and altogether the six basses, with the three parts in the upper extreme, make the simple combination of 3d, 5th, and 8th, all doubled and joined with the compound combination of the 7th and 9th, to every note of the fundamental bass. The two first basses 1. 2. are the same as the two parts upon the bass in the first canon of the code, doubling the fifths and octaves of the superior parts, as is done in canon iii. The other two basses 3. and 4. are the same as the two parts in canon vi. giving the ninth to the fundamental bass, prepared by the fifth and resolved into the fifth; and the two last basses, 5. and 6. are the same as the parts in canon iv. giving the seventh to the same fundamental bass; which seventh is prepared by the third, and resolved into the third, as it is in canon iv. But in regard to every bass separately, in the three divisions, the superior simple combination of the three parts in the first staff, become all inverted in different manners, namely in the first division the inversion to the two basses 1. 2. is the 4th and 6th resolving into the 3d and 5th: So the basses in the second subdivision, when they have changed alternatively the first combination into the 4th and 6th, by the skip of guides, this accord is changed by the next syncopation into the 2d, 4th and 7th. The same in regard to the two basses 5. and 6. in the third division, which basses ascending a third one after the other, change their first combination of 3d and 6th, which is inverted in the following measure 2d, 4th, and 6th, and it is resolved again into the 3d and 6th. All these different inversions joined together with the upper three parts, and the six basses, make the fundamental compound combination of 3d, 5th, 7th, and 9th, to every note of the fundamental bass, as it is apparent in the above example vi. plate 48. which shews all the inversions by syncopes of the compound harmony belonging to the perfect consonant skip of cadence of indeterminate harmony.

N. B. It must be observed, that in a composition where the bass syncopation is a false, the same false cannot subsist in the other parts, without proceeding by octaves, which is improper, and not truly harmonic: And when there are two parts which proceed, one by the 7th and the other by the 9th, over the fundamental bass, as it happens in compositions of eight or more real parts, the superior parts must proceed with only the simple combination, as in the above example. But when the eight parts are all doubled and tripled, the 7th and 9th may subsist also in the superior parts, provided the resolution be done on the contrary motion, namely, one ascending the other descending; or else by change, as has been shewn by their respective canons in the first part of the code.

ARTICLE IV. *Of the varied and diminished Bass Notes.*

THE simple doubled varied notes are expressed in example vii. plate 49, which shews the inversion of the fundamental notes in simple combination, and example viii. in the same plate, shews the inversion of the compound accord by the 7th and 9th. The first example is composed by the simple combination of the three superior parts at the top, to the fundamental bass at the bottom of the example, and the four inclosed basses made the inversion. The other example viii. which also has the simple combination betwixt the upper parts and the fundamental, but the four inclosed basses ascending one third, and after descending gradually, make the compound combination of the 7th and 9th to the fundamental, inverting in that manner the simple combination, as is clearly shewn by the figures at every one of the same four basses.

The following plate 50, has the example ix. which is divided into four parts. The first part has five staves; in the first staff is the fundamental bass, and the more common divisions and diminutions of the fundamental notes are in the following four basses, namely in the first common bass the fundamental notes are diminished every one into four, proceeding from the first note to the third, and returning to the first. The second common bass diminishes the above four notes of the first common bass. The third common bass has its diminished notes by skips, and the last bass has the diminished notes of the same third bass. The second division contains a continual progression descending by thirds, shewing that the same progression is subordinate to the perfect consonant skip of cadence, as has been demonstrated in the canons of the auxiliar skip of third low; and the same progression may serve for augmenting two parts more to the six parts, with which is formed the third canon, making eight real parts in simple combination, but in figured harmony.

The third part or division, contains the diminutions of the fundamental notes distributed in four different common basses; the first ascending a third, and the second a fifth, descending together by sixths gradually to the notes of every following measure: The third and fourth basses proceed in the same manner, but beginning a measure after the first two. The fourth division contains two basses, which proceed one after the other, by the skip of an octave falling into the fifth of the principal in the middle of the same measure, and passing to the third of the principal note in the following measure, as is clearly expressed in the same example. The inversions of all the common basses are expressed by the figures marked to every one, and all their diminished notes come from the fundamental notes in the first staff, which needs no further explanation.

N. B. It must be observed, that when a common bass passes particularly in accented time, with its varied and diminished notes, by the fifth of the fundamental combination, which fifth has its proper fundamental combination when it is the guide, but in the diminutions of the principal notes, being considered only as a simple fifth of the same principal note, as in the above example ix. it is in the basses 4, and 5, of the first division, in which they descend a fourth from C to G, which G may be supposed the fundamental guide, but in the same diminution it is only a simple fifth belonging to the principal note C, and not its Guide; therefore the composer is obliged to put the proper figures of 4, and 6, which is the inversion of the principal note by the simple fifth, for avoiding mistakes in the accompaniment in the organ or harpsicord; as has been done in the same example in the first measure of the above basses, and in the following measure by a line over the same measure, which signifies the continuation of the first accord.

Second N. B. In the above four examples, 6, 7, 8, and 9, all the basses are expressed, two by two, which two basses may be joined into one; the same disposition in two basses being only done for shewing the manner of dividing one bass into two, when it is wanted, as in compositions in eight or more parts; the same manner may be applied to the parts, and particularly, as it is done by the four basses in the third division of example ix. plate 50. but in the first division of the same example, is only expressed the diminutions and sub-diminutions of the same diminutions. These diminutions and subdiminutions of the principal notes arising properly from the melody, which being arbitrary to every one, may be produced in diverse and infinite manners, consequently may be also done in diverse and almost infinite manners at the pleasure and according to the genius of the composer.

Third N. B. The resolution of the ninth, which is resolved into the fifth of the fundamental note, as has been shewn in its proper canons, when it is inverted by the common bass, may seem improperly and falsely resolved, because the bass forming the false major second with the indicative ascending third, which ascending a tone, and the bass descending a tone in the following measure, the second is resolved into a fourth, which may be considered as false, or discord; but the same fourth is the octave of the principal note, and the bass in descending a tone passes into the guide of the same principal note; which two

notes may subsist together, as immovable fundamental basses of its own scale: Moreover, the same note of the guide, in which is resolved the bass, has subsisted in the preceding combination in the superior part, as seventh to the same common bass, and as octave to the fundamental bass, resolving the seventh in descending to the same note, which is the octave betwixt the upper part and the common bass, giving both together the fifth to the fundamental bass; consequently the bass resolves the second with the upper part, which gives the octave to the fundamental into the fourth, this being the fifth fundamental. This manner of resolving the ninth, when it is occupied by the common bass, is not commonly understood or known by many composers, which ordinarily resolves the superfluous second or ninth into the fundamental bass by ascending a semitone together with the parts, or descending into the same fundamental note, which is a fundamental guide, before the parts and the fundamental bass moves, which resolution makes the accord fundamental in the same common bass; but the best way is the resolution, as it has been done in the canons of the harmonic code; notwithstanding the other two common manners of resolving the same ninth may also subsist, being the same ninth or second inverted, resolved in ascending with the parts a semitone or a tone, becomes a deceptive cadence, and resolving in descending a tone before the moving of the parts, by this means passes into the guide of the next note, and in both manners the resolution is made by a third; therefore it is arbitrary to the composers.

Fourth N. B. In this article is only explained the reversion of the simple and compound combination by the common bass, with the skip of cadence, and the other skip to the guide is omitted, because when the reversion of the perfect consonant skip of cadence is known, the order of the reversion of the other fundamental and auxiliar skips will be understood; only it must be observed, that the imperfect consonant skip to the guide has no proper reversions, only by the fourth and sixth, and this reversion cannot be done naturally from the bass, without proceeding by falses of anticipations, which may be only supported once or in the perfect cadences. For that which regards the diminutions of the fundamental notes, is the same, as it has been explained also for dividing the basses; only it must be observed in the skip of cadence, the second bass, or part, repeats the subject into the fourth high, or fifth low; but in the skip to the guide, the repetition must be done by the fifth high or fourth low; also in the division of the parts, or basses proceeding by the auxiliar skips, the repetition must be by the third high, or low, as it is the auxiliar skip, but this rule may be changed in the transposition of the scale by imitations.

Some ARTICLE V. *Of the ~~first~~ Equivocal Combinations.*

THESE equivocal combinations must be distinguished into two different sorts or manners. In one manner the sounds are equivocal, it not being possible to know where, or in what scale, the same combination may pass by only hearing it; but when the sounds are properly denominated in their notes, and figured under the bass note, immediately is known the next combination. The other sort of equivocal combinations are equivocal not only in their sounds, but also in their proper denomination. The above first sort will be explained by two following articles vi. and vii. Now in this article we shall explain the second sort of these equivocal combinations, which are derived from the syncopes of the common bass, by which are tied two, three, or more notes. These two, three, or more notes, may be one of the two principal stable and immovable fundamental basses, both of which have the right of supporting all combinations of the simple harmonic progression, which may be made by the original sounds of its own scale, without moving from their stable places, as mentioned in the first article of the fourth chapter, book the first: Consequently the different combinations of the superior parts are not considered as inverted, but as proceeding naturally in their own scale, successively resolving their combination by their own motions, as it is expressed in example x. plate 51. which example is divided by three bars, making three measures; in the first measure is described the simple combination

to the fundamental bass C; in the second measure, the parts moving, change the simple combination into the compound accord 2d, 4th, 5th, and 7th, which properly belong to G as fundamental guide in the scale of C, as 3d, 5th, and 7th; in the following measure, the parts moving again, resolve the false accord done to the bass in the antecedent measure, restoring the first simple combination to the bass, which has continued firm in the principal note C. The following example xi. in the same plate, is also divided by three bars or measures; in the first and second measure is the same combination as in the first example x. but in the third measure, the parts keeping firm the combination of the fundamental guide G made in the antecedent measure, the bass resolves the false accord of the second measure, descending one note, which is the third sound to the combination of the guide G. In the first of these two examples the bass being always firm in the principal note C, and the parts moving, makes the false combination in the second measure; which false or discord is resolved in the third measure by the same parts; the bass must be considered as stable and immovable foundation of all the original sounds of its octave or its own scale. In the other example xi. of the same plate 51, the bass resolving in the third measure the false combination of the antecedent measure, shews that it is a common bass, because being fundamental in the first measure, and keeping firm the same note in the second measure, in which the parts proceed from the first combination of the principal to that of the guide, and after in the third measure the parts keeping firm, and the bass resolving the false combination of the second measure in descending as above-said, shews that the same bass that has made the discord, or false combination in keeping firm in the second measure, and not the parts in moving, to which movement the bass should have followed skipping to the guide; but in keeping firm the note in the second measure, it is changed into the eleventh note, which is the fifth third in the harmonic system belonging to the full combination of the guide, and in this manner makes the inversion in the same eleventh note, which becomes a second below the fundamental fifth note D, and a fourth below the fundamental indicative descending 7th F, also a fifth with the octave of the fundamental guide G, and a 7th major with the indicative fundamental ascending third; all which is resolved by the same bass, as common bass descending into the note B, namely the second into the third, the 4th and 5th into the false 5th and 6th, and the major 7th into the octave; which all together, the bass with the parts, make the fundamental combination of the 3d, 5th, 7th, and 9th, to the fundamental bass G not expressed.

This is the explanation of the eleventh note of the guide mentioned but not explained in the *N. B.* at the end of article ii. of the same chapter.

By the two above examples may be easily known and distinguished the fundamental bass from the common bass, which consists only in observing the resolutions of the falses, if they are done by the bass, or by the parts; it being a general rule, that the resolution of all falses, or discords, must be done by the same parts which make the same falses; which general rule has some exceptions, as has been seen in the canons of the harmonic code.

ARTICLE VI. Of some particular Inversions arising from the artificial Scale.

IN the fifth chapter and fourth article of the first book, has been demonstrated, that the artificial scale is divided into two different scales, one ascending, the other descending. In ascending the 6th and 7th sounds are necessarily major, or sharp; but in descending are both minor, or flat. This is the cause that the inversion of the compound combination with the 7th and 9th to the fundamental guide, becomes somewhat diverse from the like inversion of the same combination in the natural scale. The figures which represent the above false combination, are the same in both scales natural and artificial, but the sounds are not the same; and that is also the cause that these inversions are called equivocal accords, or combinations, as will be explained in the next article. When the common bass in the natural scale occupies the indicative 3d of the fundamental guide, the inversion becomes 3d, 5th, and 7th (as has been shewn) the same is in the artificial scale; but

the 7th derived from the descending indicative minor 9th of the fundamental guide, must be marked flat. When the same bass is in the fifth note of the fundamental guide, the inversion is 3d, 5th, and 6th, in the natural scale, the same as in the artificial scale, but the fifth of the common bass derived from the minor or flat 9th, must be diminished a semitone, and figured as a false 5th; the same also when it occupies the place of the 7th of the fundamental guide, its 3d being the same flat 9th, consequently must be flat; and the accord is the same in the natural scale, namely 3d, 4th, and 6th, but the 3d in the natural scale is naturally major, derived from the 9th, which is major, and the 4th, derived from the indicative sharp 3d, must be marked sharp: The interval betwixt the above 3d flat and 4th sharp in the combination of the artificial scale, is compounded of one second; but exceeding a semitone the major natural second; consequently the sound is the same as the flat third, being composed of the same interval, notwithstanding it is considered as a second, because the mark, or sign of sharp, or flat, alters only the sounds, but not the names of the sounds, as has been before-mentioned. It is the same when the common bass occupies the fundamental indicative flat 9th, the inversion is 2d, 4th, 6th, and 7th; the interval betwixt every one of these sounds is of flat 3d, but it is not so in the natural scale, and this difference derives because the natural notes and figures in the natural scale represent the natural sounds with their proper names; but in the artificial scale the figures and notes represent the names of the same notes, but not their proper sounds. In the natural scale the sound named A is distant from the following note B the interval of a tone, which is the same as two semitones; but in the artificial scale (supposing the scale of 3d flat) the same A being flat in the fundamental combination of the guide G, as its descending indicative 9th, becomes distant three semitones from the note B natural, which must be major or sharp, as indicative ascending 3d of the guide G; and the above interval, from A flat to B natural, being three semitones, consequently the sound corresponds to the flat third, not to the second, as before told; but B being the successive second name of A, is called a second; and when the same A flat serves as 7th to B natural, this 7th being composed by nine semitones, which properly is the interval of a major 6th, but being the same A flat, the seventh name from B, is named and marked as a 7th, which is distinguished by the surname of 7th diminished. This is the difference of the combination of sounds between the natural and artificial scale.

ARTICLE VII. Of the different Uses arising from the Inversion of the fundamental Accord of Guide in the artificial Scale.

FROM the explanation of the above article it is manifest that the compound combination with the major 3d to the fundamental bass note, joined to the 5th, 7th, and flat 9th, in the artificial scale, when the fundamental bass note is abstracted, the following four notes, namely the 3d, 5th, 7th, and 9th, make a combination of four successive flat thirds, forming an octave, divided into four equal parts, every one in the same degree of harmony with the other; consequently all together joined, in whatsoever manner they may be inverted, are perfectly harmonic, therefore they need no preparation nor resolution; and from one of the said combinations may be passed to another like combination, composed by four different flat thirds, without resolving the antecedent combination: But these passages without resolution can only subsist for two times, or at most for three, because the octave being divided by twelve semitones, by which the octave becomes composed of thirteen sounds, and the above combination consisting in five sounds forming four intervals, each divided by three semitones, every one of which is a fourth part of the said twelve intervals, by which the octave is divided, as above-said; consequently when from the accord of the first semitone is transposed the same accord to the second semitone, and after to the third semitone, proceeding to the other semitone, the progression of the fourth semitone becomes the same, as has been done by the first semitone and also of the others respectively one to another: Moreover, being the same accord of indeterminate combination and progression, it must at last be resolved into one of the two consonant skips fifth low or fifth high, otherwise the sensation

sensation will be tired in prolonging the expected conclusion of the harmony promised by the first of the above accords. These accords or combinations derives from three semitones whatsoever may be, but following one another, as in example xii. plate 51. Every note of the above combinations may be considered as fundamental indicative ascending 3d, leading in their next semitone, which is the principal note of the following scale, consequently every one must have their proper fundamental bass note a sharp 3d below as guide to the succeeding scale, as may be seen in example xiii. of the same plate 51, in which example is supposed the second semitone C sharp, described in example xii. the combination of which is C sharp, E natural, G natural, B flat, and C sharp, which accord forms a combination of four successive flat thirds. The common bass in the same example is supposed always in the indicative ascending 3d, in every one of the four divisions, by which it is evident, that suppose C sharp the indicative ascending third leading into the next semitone D, the fundamental guide must be the note A distant a major third from C sharp, passing together to D the principal note of the indicative scale. If it is supposed that the note E of the same combination be the indicative ascending note leading in F 3d flat, C natural must be its fundamental guide, but C sharp becoming the 9th of the fundamental combination, must be changed into D flat, which is the same found as C sharp, because this name of C sharp cannot subsist in the scale of F 3d flat. If G natural in the same accord is considered as being the ascending indicative 3d, leading in A flat with its 3d flat, the fundamental note of its guide must be E flat its indicative 3d to the above note G natural, its fifth B, D flat is 7th, and F flat its indicative descending 9th, which D flat and F flat are the same sounds as C sharp and E natural. If at last it is supposed that the note B flat of the same accord, C sharp, E natural, G natural, and B flat, be the indicative ascending 3d leading in C flat, the fundamental guide must be G flat; but for the convenience of the easier scale, the name of B flat must be changed into A sharp, and C flat into B natural, being the same sounds; consequently the fundamental guide G must also be changed into F sharp; A sharp being its indicative note leading in B natural, subsisting in the rest of the combination, namely C sharp as fifth to the guide F sharp, and E, G, both natural, as 7th and 9th flat to the same guide F sharp, as is clearly described in the above example xii. from which it is apparent, that the combination composed by four successive flat 3ds, may pass into four different principal, but artificial scales: Moreover, if these four artificial scales are changed into natural, namely, instead of giving to them the flat third, is given the major 3d, the same four scales are changed from being principal of their own scale into guides to four other artificial scales, as it is expressed in example xiv. plate 52. the reason is, that passing from the first bass note C sharp of the same accord into the note D, this same D having its 3d sharp, cannot be a principal note of its own scale, because the seventh to the antecedent note C sharp, being B flat, it cannot subsist in the scale of D 3d sharp, where B must be natural; consequently the same D must only be considered as fundamental guide passing into G flat 3d, which is the same as the above B flat in the first combination, as it clearly appears in the above example xiv.

First N.B. The first basses in these two examples are both common, and not fundamental, being in the indicative ascending 3d of the fundamental accord, but they may subsist also in every one of the notes of the above same combination, namely in the 5th, 7th, and 9th, consequently the combinations and the resolutions become inverted, and all different one from another. For example, if the common bass is in the fifth note of the fundamental accord, which is E natural in the first combination of both the examples, the first accord being the bass in the note, C sharp is 3d, 5th, and 7th, flat; the bass in the fifth E being the first combination, is inverted into 3d, 5th flat, and 6th sharp; and the resolution is not ascending, but in descending one note to the principal; and the bass being in the note G, which is the 7th flat of the fundamental accord, the inversion is 3d flat, 4th sharp, and 6th natural, and the resolution descends a tone in the third note of the scale. And the bass, when it is in the last note of the combination which refers to the 9th of the fundamental accord, the inversion is a second extreme sharp 4th and 6th natural, in the resolution of which the common bass descending a note, the accord becomes the 4th and 5th, or the

4th and 6th, which seems as a false resolution, but is the properest and original resolution, as has been explained in the third note of the fourth article of this chapter. The above explained combination derived from three semitones following each other, as in example xii. plate 51. may be called equivocals, because they may pass into different scales, without being known, by hearing the sounds, where their resolution will be; but when they are properly known and figured, the succeeding scale is presently known.

Second N.B. The above-said combinations, resolutions, and arbitrary passages in different scales, shew evidently the impossibility of that so much celebrated division of the tone and semitone subsisting in major and minor; which division never can have subsisted in practice; but if it has subsisted, must be only in the first time of the Greeks, where was used the lira of the four strings. Notwithstanding the above distinction of the tone and semitone into major and minor, as it is now supposed true, certain, and unquestionable, not only by so many writers in music, which following the opinion of *Ptolomy*, and after of *Boetius*, have shewn their skill in calculating the reasons of the supposed intervals betwixt these different tones and semitones, to find out a just manner of transposing the Greek diatonic scale, knowing nothing, or very little, in the practice of the harmonic art; but also by almost all the present practitioners and composers in music, shewing at the same time that they know nothing of the true harmonic theory, which must be formed and calculated, not by the mathematic rules, which have nothing to do with the human sensation, but by practice; the faculty of forming perfectly the same scale has been provided according to the general constitution of mankind, by the same nature, and confirmed by rules of practice derived from physic, namely for the general constitution of the common human hearing.

ARTICLE VIII. *Of some irregular Combinations, which happen in the artificial Scale.*

IN the first note at the end of the second article in the third chapter of the first book, has been mentioned, that besides the intervals of the two seconds major and minor, the two fifths perfect and false, the two sixths and sevenths major and minor, also of the perfect octave; there is a second, which is composed of three semitones, commonly called the superfluous or extreme sharp second, being equal to a flat third, one 5th, and one 6th, called superfluous, the 5th formed with a semitone more than the perfect fifth, also the superfluous 6th a semitone more than the major 6th, the 5th superfluous being equal to the minor 6th, and the superfluous 6th to the minor 7th. Also a 7th, called diminished, composed of nine semitones, being equal to the major 6th, and an octave, also called superfluous, containing a semitone more than the perfect octave, being equal to the minor 9th. The combinations with every one of these above intervals only happen in the combinations of the sounds of the artificial scale, because it has two scales, one ascending and the other descending, as mentioned and explained in the first book; and that happens when two sounds of these different scales are joined in one combination, namely, one in the common bass, the other in the superior parts. The extreme sharp 2d derives by being joined to the flat 9th of the fundamental guide, with the tenth note, which is the octave higher of the sharp indicative third; for example, the 9th in the fundamental combination of the guide of the artificial scale C 3d flat, is A flat, and the octave of the indicative 3d is B naturally sharp; from A flat to B natural is one interval of three semitones, which is the same as the interval of a minor, or flat 3d; but because the name of the sound B is the second after A, it is called a second, as mentioned before. The same of the superfluous fifth. For example, supposing the artificial A natural, its seventh note which is G, is naturally minor in descending from the octave of the principal A; but in ascending from the principal A to its octave the same G must be sharp, forming a major 7th to the same principal, and consequently altered with one more semitone, as has been explained in its proper place; and when it happens that the same note G sharp is joined with the bass note C, which is the minor 3d of the principal, this combination makes the superfluous

superfluous fifth; on the contrary, G being natural in descending, gives the perfect fifth to the same bass C, as in the example xv. plate 52. the interval of the superfluous fifth is the same as that of the minor 6th.

The superfluous 6th happens (supposing the same above scale A natural) when the common bass descends gradually from A to G natural, and successively from G to F also natural, G being the seventh note and F the sixth of the principal note in the scale, as may be seen in the above example xv. in which the second part in the last measure but one having continued the antecedent measure in E, its fifth note of the simple accord, giving successively to the common bass the accord of 5th, 9th, and 7th, at last it resolves the note E in D sharp, which is computed a major 6th to the bass note F natural, but the just interval betwixt these two sounds D sharp and F natural, is a minor 7th, which interval respectively to the name is called sixth with the surname of superfluous; and the same D sharp being not composed in either of the two scales ascending or descending, consequently the false accord becomes of false relation; notwithstanding that the ear is not offended, for the reason of descending the common bass from the octave of the principal note A, in which is combined with the simple accord, passes gradually to F 3d below, which in the descending scale must be natural, and still remaining in the same F which belongs to the same artificial descending scale A with the rest of its accord, it keeps firm in the sensation the remembrance of the same scale; and the bass being in the basis of the above combination covers partly the harsh sound of the superfluous sixth, in a manner, that by following the resolution, when all the parts are properly combined with the same superfluous sixth, it becomes extremely pleasant, for the same superfluous sixth ascending to the octave of the fundamental guide of the scale, and the bass descending into the same fundamental guide, both proceeding by semitones, which is the shorter way, always used by nature, and consequently the more agreeable. See the above example xv. plate 52. As to the superfluous octave, it happens when the common bass descends in the supposed scale of A natural, from the octave of the same A to G natural, which G must be compounded with the octave for the preparation of the 9th to F, into which the same bass descends from G, and the same 9th is resolved into F sharp, which is the superfluous octave to F natural; this superfluous octave F sharp is a minor 3d to D sharp, which is the above explained sixth superfluous; and the same D sharp being the 3d sharp to B natural, which becomes the guide to the following note E; consequently F sharp is the perfect fifth to the above guide B, by which accord it seems like a fundamental guide to E, but is only relative guide to the principal fundamental guide of the scale A natural; and notwithstanding the above B is only a relative guide, being the first succeeding guide of the principal guide E, may have also arbitrarily its 3d sharp, instead of its minor 3d; which B is distinguished clearly for a relative guide by the bass subsisting in the note F natural, which cannot be comprised in the scale of E, but only in the descending scale of A, and the superfluous octave F sharp, must subsist in the other ascending scale; consequently it is evident that the note E is not the principal scale, but its fundamental guide, and the note B the relative guide of the fundamental guide E having the arbitrary privilege of natural minor 3d, to be changed at pleasure into a major 3d, must be seen in the above example xv. plate 52, where, in the second measure of the example, is described the false combination of the superfluous fifth, and in the second time of the fifth measure both the superfluous sixth and octave are all marked with (*).

In regard to the seventh diminished, is the interval betwixt the ascending indicative major third, and the descending indicative flat 9th, which interval is the same as that of the major 6th, as has been before explained.

N.B. The combination with fifth, sixth, and octave superfluous, must be used with judgment, and very seldom, particularly the superfluous octave, which is the same interval of a minor 9th, because being obliged to resolve itself by ascending a full tone for giving the sharp 3d G to the fundamental guide E, this resolution becomes somewhat improper,
and

and a little harsh, for the reason that all falses existing in the second octave, have their proper resolution in descending, and may be used in ascending only when all the parts are doubled.

ARTICLE IX. Of the different Motions and Variations of the Parts.

AS the bass in the figured harmony must be considered as one middle part of the combination, being obliged to proceed not only by skip, but also by conjoin'd degree, for the reasons mentioned in the second article of this present chapter; so the parts are obliged to proceed in the same manner for the same mentioned reasons; therefore by proceeding not only gradually, but also by skips, they pass from the place of one part to the place of another part, as it may be seen in the example xvi. plate 53. This example is described in five staves, in the first staff is the supposed melody, in the second staff is the same melody, but varied by the diminutions of the principal notes; the third staff has the principal notes of the proposed melody; and the fourth staff contains the combination, which is compound, belonging to the fundamental bass in the last staff: In the same combination the principal notes of the melody in their correspondent notes, as they proceed in the third staff, are marked thus (*), by which is shewn the progression of the principal notes of the melody passing from one part to another in their combination by skips. The diminutions in the second staff may be varied gradually, or in skips, in almost infinite manners, not only by all the upper parts, but also by the common bass, as mentioned; but in whatsoever manner these diminutions may be done, it must always be correspondent to the fundamental combination simple, or may be compound; also the resolutions, when the variation is made by skips, must be done from the note, which is nearest to the fundamental resolution. But for a better, and more distinct explanation, not only for the different variations and diminutions of the parts, but also of the bass notes, we have chosen to examine the beginning of the first sonata, a violin solo in the fifth opera of Coreli (being generally known in all countries) for explaining the divers manners of variations by syncopes, skips, and all sort of passages relating to the above purpose.

This first sonata which is composed in the key of D 3d sharp, consequently is a transposition of the natural scale a tone higher, begins in a kind of introduction in common time grave, composed in two measures. The first measure has the upper part of the octave of the note D, which is the principal consonant note of the scale occupied by the bass; in the middle of the same measure, after a little syncope of the first note, the part skips to the 3d of the accord, from which immediately it descends gradually to the first note again, passing to the note B in the second measure; which B may belong to E, as its relative guide, being its perfect fifth, or to the note G to which the note B is its 3d; but the author in figuring 4th and 6th, instead of 2d and 4th, has chose G, being of the better progression, particularly in the beginning of a composition, because the same G is the immediate sub-principal relative to the principal of the above scale D, and consequently the more natural, and pleasant progression or modulation; and the bass keeping firm the note D at the beginning of the second measure, makes the false accord to the part, which passing into B transposes the harmony into the note G as fundamental relative, and the inversion is the fourth and sixth, the fourth is the octave of the fundamental bass not expressed in the accord, and the sixth is the note B of the part; and because the progression passes immediately to A by the motion of the part, which after the note B descends to A octave of the principal guide of the scale, and the antecedent fundamental note G which cannot gradually ascend to the same note A in a fundamental progression, consequently the fundamental must descend with its auxiliar skip of 3d low into the note E, which is the relative guide of the principal guide A, and the note B of the part becomes the fifth of the same relative guide E, descending to A octave of the principal guide, and the bass with its relative skip of cadence ascending to the same note A principal guide, and the continued note D in the common bass, becomes the 7th to the relative guide E, resolving in

in C sharp 3d of the same principal guide A, and the part descending with the following note to F 3d of the octave of the principal first note of the scale, the bass also passes into the principal first note; all according to the same laws and rules explained by the canons of the harmonic code. After the above two measures in grave time, the part moves in quicker time, making a kind of intonation in *essfugita*, as it is called by the *Italians*, which in *English* signifies flying, passing successively from one note to another, of the principal simple combination, ascending by three different transpositions of the combined notes to the highest pitch of the instrument, and after descending in the same manner to the lowest octave where it begun. The above-said *essfugita*, or intonation, passes from the notes of the last measure into the note G sharp of the succeeding measure in *adagio*, or grave time, which G sharp belonging to E fundamental guide to A as its indicative 3d, consequently the first scale D is transposed into A; and the bass having always kept firm the note D of the first scale, as immoveable fundamental bass, at least instead of passing from its stable fundamental to the fundamental bass note of progression E under its ascending indicative 3d occupied by the part, it continues firm in the same first note D, consequently in the antecedent measure before the *adagio* time, the same bass note D, which has been always a stable fundamental note, as mentioned, is changed into a common bass in the middle of the same last measure, in which place it should have passed into the note B as relative guide to E fundamental guide in the next measure under the note G sharp of the part, which G is the indicative 3d, leading into the principal note A; but the note D, in which the bass still continues, becomes the 7th indicative descending note into the 3d of the principal note A; and the same D in the middle of the antecedent measure becomes the third of the note B relative guide to the fundamental guide E, as before-said. After a little pause the part begins a melody in common time *adagio* in the scale of A 3d major, with the fifth note of the scale, in the same time the bass note of D 7th of the fundamental guide E resolves descending in C sharp, which is the major 3d of the principal scale A, as may be seen in example xvii. plate 54. The same melody is continued in four measures, making at their ends the perfect cadence in the same scale A, after which the part repeats the first little introduction in grave time transposed in the scale of the note A 3d sharp, to which follows in the same scale the same first intonation in flying time, after which the same antecedent melody, but transposed in the scale E, and after the fourth measure, in which it makes the cadence in E, continues with its progression through the different scales of A and G, and at last the melody, accompanied by the bass, makes the last cadence in D, the first chosen scale.

In the above example is only transcribed the first grave, first *allegro*, and the following first *adagio*, to which is added the fundamental bass and its proper notes of the fundamental combination in their reversion.

The second grave *allegro* and *adagio* following in the beginning of the said sonata, is omitted, being only a transposition of the first grave *allegro* and *adagio*, the explanation of which may be applied to the rest omitted; which explanation, joined with the other examples explained by the antecedent articles, seem more than enough to distinguish easily and clearly all sorts of inversions that may be done by syncopes, diminutions, and other sorts of motions different from the fundamental, by the parts and basses in figurative music, with their proper relation to the fundamental harmony.

C H A P. II.

ARTICLE I. Of Compositions in divers Parts.

HE figured music may be composed for divers numbers of parts, namely for two, three, four, five, to sixteen or more real parts. The compositions in two parts, when only one part with a simple bass, as a cantata or song for the voice, is called a cantata or song *a voce sola* by the *Italians*, and for a simple violin, or flute, or other instrument with the common bass, is called also a sonata or solo. When the compositions are designed for two voices, or two instruments accompanied with a simple bass, they are called two, or *duetti*, by the same *Italians*; but when the bass is concerted with the two superior parts, with the addition of another common bass for the organ, or for the harpsicord, are named *terzetti* in *Italian*, and *trio* by the *French*: The same of the quatuor, where four concerting parts with a bass continues. The instrumental compositions never pass the number of four, or at most five parts real. It may be observed, that in many compositions for many different instruments, as seven, eight, and sometimes for twenty or more parts, they are not all real parts, but the same principal notes of four or five real parts distributed in the others in simple or different manners of diminutions, consequently cannot be called real parts, which signifies that all are diversly concerned, not only in the harmony, but also in the melody. The vocal compositions pass much over the instrumental, going from eight to sixteen, and more real parts; these sort of compositions for eight or sixteen parts, serve only for church music, on occasion of some great solemnity, which are performed by a great quantity of voices, joined also with instruments, or without. These great compositions are ordinarily divided into two or four chorusses, disposed in a manner, that sometimes one answers to another, and are not always in sixteen real parts, but divided in particular compositions for two, three, or four voices, as in a particular concert; and some little chorusses are sometimes mixed, formed by ten or more voices, which are ordinarily sopranos or contraltos singing all together a melody at the unisons, with only an organ playing with *tasto solo* the same melody, or with only keeping firm continually the principal note of the guide, or of the first note of the scale for to keep the voices in tune; which makes a very pleasant effect when it is done in a proper place, as betwixt two chorusses in full harmony. But when all the chorusses are united, as in the beginning, and at the end of the composition, the full combination in eight or sixteen parts may be introduced in its proper place. The greatest difficulty in these kinds of compositions, is not only in disposing the parts in their best and proper places, but also in the disposition of the different and particular concertos of voices; not only respectively as to the convenience of the words, but also in the repartition of the above divers concertos of voices, in a manner, that being intermixed with the full chorus, one concerto of two, three, or more voices, relieves its following concerto or chorus. In regard to the disposition of parts, care must be taken when the chorus proceeds in full harmony, of putting the third simple combination in the middle of the full combination. And it must be remembered that the full harmony is composed with all the notes of the harmonic system, which notes are the three different combinations joined together, belonging to the guides of their different scales, namely the first harmony of the same guide, which is compounded with 3d, 5th, and 7th, to which follows in the seconnd place the simple harmony of its 7th, which is the fourth note of its principal scale, and consequently its sub-principal relative; after which follows the third harmony, which is that belonging to the octave of the principal note of the scale, ending in the double octave of the fundamental guide. This third and last simple harmony, which makes the full harmony, is that which must be distributed into the middle parts of the full combinations; particularly the third of the same last harmony, which is the thirteenth in the full combination, being too much sensible when it is a major 3d, and consequently makes confusion in all the combination; for that reason the same 3d must be

be in the middle, but the best way is only to use it in some cases of necessity. The octave and the fifth, or twelfth, of the said third combination, may be used sometimes in the extreme high part of the combination, particularly to give some strong expression to the words when there is occasion; but ordinarily in the high extreme must be placed one of the two ascending or descending indicative notes, which are, as has been explained, the 3d and 7th of the guide; or in the artificial scale instead of the 7th, the 9th, which is properly the indicative descending note of the artificial scale: by this disposition, the principal parts being also doubled and tripled, the progression into the different scales is sensibly and clearly distinguished without confusion. In these greatest compositions may be used all sorts of falses by supposition, by change, and sometimes by anticipation, but these very seldom, and only in the final cadences, as has been explained in the canons; also may be used all uncommon resolutions ascending, together with the common in descending, but in the manner explained in the same canons. But in compositions of only eight parts, when they are in full combination, the uncommon falses and resolutions ascending, must not be used so freely as in sixteen or more parts, because ordinarily the parts are not doubled enough, as in more parts, by which the notes, not only doubled, but tripled and quadrupled, strengthen the principal sounds of the compound combination; otherwise a composition in five real parts will have a better effect. But when all the sixteen parts are doubled and tripled, and all well disposed in their proper places, with a progression gradually ascending, and successively descending, make a wonderful impression, not so easily perceived by those who never heard these sort of performances.

In the compositions in two, three, and four parts, the obligation of following the principal harmonic laws is very precise; and particularly in two or three parts, which compositions being formed only by two or three sounds, must be chosen from the rest of the full combination the properest for the best harmony. In two parts, *viz.* for one voice or instrument, with a single bass serving merely for compliment, it is very easy to be done, but when the bass must follow the part with good taste, intermixed with some proper melody by imitation or contrast, to the melody of the part helping them, and without the least confusion, it is not so easy. The same is in three parts, when the bass under the two parts proceed only for a simple compliment, in which manner may be called a duetto or two, which is easier than when the bass is obliged to answer to the melody of the two parts, in which case are properly called trio or terzetti, with another bass for the clavicord or organ, in simple compliment of the harmony, or without the same. In like manner may be considered the quatuor, as before explained.

In compositions for two or three parts, are absolutely forbidden two perfect fifths or two octaves following one another, for the reason of being simple consonant, and not harmonic, as mentioned and explained in the first canon of the harmonic code, II^d book; and, in two parts, not only rigourously are forbidden the two fifths or two octaves explicit, but also implicit; consequently when the part proceeds not by thirds or sixths, or by the falses, as second and seventh, it must always proceed by contrary motion, and this proceeding is a general rule. In compositions in three parts, must be combined always the fundamental third, in whatsoever denomination it may be, as a 2d, 4th, or 6th sharp or flat, in all the combinations when it is possible, and more proper for the harmony. In compositions for four parts, are permitted two fifths or octaves, but only in contrary motion, because two other parts may supply the first original harmony.

N. B. It must be observed, that in compositions of simple and compound combination, the third of the scale when it is sharp is better in the middle of the accord than in the extreme acute; consequently the seventh, when it resolves into the sharp 3d, must also be covered with some other sound of the same accord, and not be in the acute part, in which manner the resolution into the sharp third, becomes in the middle of the following combination: on the contrary, when the scale has its 3d flat, this flat 3d is best in the high extreme, and consequently the fundamental 7th of the guide must also be in the extreme high part. The above rule in regard to the scale of the sharp third, is diametrically opposite to that, which

has

has been mentioned in regard to full harmony: the reason is, that the full harmony being composed of all the three principal harmonies of the scale, as in the scale of C, are G, F, C, must necessarily have their indicative notes into the highest place of the combination for to distinguish their fundamental and principal harmony, otherways they may be confounded. But the simple and compound harmony cannot be confounded by the above three harmonies, one of which is excluded, and the acute sound being in the acute part, consequently the more sensibly weakens the other sounds of the combination; so on the contrary, the flat sounds, which are in proportion of lesser sensation, are always better in the highest part.

These general observations in the compositions of divers numbers of parts, may be subject to some exceptions on several occasions, particularly on account of the melody, also for some particular expressions by the harmony; all which the composer may distinguish when he has acquired a sufficient practice and knowledge of the compositions.

ARTICLE II. Of Fugues and Imitations.

THOSE kinds of compositions, in which one part begins a subject of melody, and after some pause, or rests, another part follows in a like or the same subject, is called fugue by musicians: it is distinguished in real fugue and imitation. The real fugue, as improperly called, is when the part which follows the first repeats the same subject, or near the same proposed by the first part, at the unison, or fourth, or fifth, or at the octave; but without departing from the sounds of the octave proposed by the first subject. The imitation is called when the subject of melody is repeated by the following part in whatever note of the octave, at the pleasure of the composer, as in the 2d, 3d, 4th, 5th, 6th, 7th, and octave, without being obliged to keep the same repeat or answer in the same octave. The real fugues are generally used in church-music; but very improperly used, and very improperly named; because the said repeat or answer being obliged to be done in the limits of the proposed octave, cannot be always like the proposed subject, but it must be altered in some notes for sake of the mode, as it is called by musicians, which we call scale, or octave, in which has been proposed the subject by the first part. On the contrary, the imitation gives always the answer very like the proposed subject, being not constrained to the same mode, or octave; consequently the imitations are in better right to be called real fugues, or real imitations: but because *Guido Aretino* in harmonizing the *Cantus Gregorian* applied to the service of the church, which are divided in eight different modes, has followed the *Greek* manner of singing those cantus without sorting from their different modes or octaves; so the successive choristers, and choir-masters of those first times, being better acquainted with the *Greek* modes than with the different harmonic combinations, and knowing only the most simple harmony introduced by *Guido*; consequently they, with all successive musicians to this present time, have supposed and do suppose, that the fugues in the precise compass of the octave called modes, be the very proper fugues calling them reals; and the imitations, because sometimes change the octave, passing into the following octave of the fifth ascending or descending, are considered as improper and irregular: but now, that the harmony is arrived to its perfection, and the same melody is come out of its old bondage, and also arrived to its perfection, being totally changed, and the old manner only conserved and practised in the common services of the church, seem very convenient that the old terms and names, when improperly applied to the present music, may be justly changed. The above-said fugues and imitations are also very improper for the church, but of that more will be spoken in the article of the church-music. These fugues, or imitations, which seem as a musical pedantry, notwithstanding they may be used with taste and judgment, and properly varied, which very seldom happens, are ordinarily, and not properly fit for the general pleasure of the public: But the study and practising them are the best and necessary means for acquiring a perfect knowledge of all sorts of combinations and progressions of harmony, which renders very easy the composing in music: therefore, a student in the harmonic art must never neglect practising the composition of all sorts of fugues,

fugues, not only in the limited manner of those called real fugues, but also in all sorts of imitations, not for the public pleasure, but for his own study. In this manner he will be capable of composing and adapting the harmony to all sorts of melody as he pleases, in the manner which is called by the *Italians* fugato, or by imitation and by reversion, or adding together different melodies, without the ostentation of continuing the same subject in a real fugue or imitation, sometimes more than an hundred measures in a dry fugue or imitation, only by rambling from one scale or octave to another; and often with a bad melody and harmony.

ARTICLE III. Of the Manner of composing Fugues and Imitations.

THE art of composing fugues and imitations, is not generally so hard as it is supposed; what may be a little hard for those particularly who are not furnished with a good taste, is for a prompt invention of a good melody, which must be for the best compassed in lesser measures, as is possible. If the chosen subject may be divided in two parts, it will be of good use in the continuation of the composition in shortening them, by which the answer of the second part coming sooner makes the greater variety. When the subject of melody is chosen, it must be observed if the answer becomes proper, particularly if the fugue is what is called real, as above-mentioned; (it must be remembered that the principal notes of the octave are two, namely the first note which is the principal of the scale, and the fifth note which is its guide) if the subject is between the principal note and its guide, the answer which follows must be betwixt the guide and the octave of the principal. For example, supposing the natural scale C, the subject beginning in C passes to D, the answer is G to A; if the beginning is D passing to E, the answer is A to B; also beginning in E to F, the answer is B to C: but when the notes of the subject proceed by skips, the response is somewhat different; for instance, if the subject passes directly from C to G, skipping a fifth higher or a fourth lower, the response is G to C, skipping a fourth higher or a fifth lower; because the note C is the extreme acute of the principal C its octave below, which in the above fugue real is forbid the passing over; but in the imitation the response is from G to D, and the subject skipping from D, or from E to C, must repeat A C, or B C, if the subject descends from C to B returning to C, the answer descends from G to F, and from F to E, because F being distant a full tone, which is the perfect fourth of the principal, becomes the flat seventh of the guide G, the same seventh being the indicative descending note of the scale, consequently must be naturally resolved into E, which is the third of the principal C; but by imitation the just response may be done by G to F sharp returning in G, which cannot be done in real fugue, the same F sharp being not comprised in the scale of C. This short distinction seems enough for the knowledge of the difference betwixt the fugues called real, and the simple imitations; being the enumeration of the divers proceeding of the various subjects of melody of too large a description, and of very little usefulness to the modern practice of the best compositions of music. Now, returning to the composition of fugues, when the subject is chosen to which the answers become just, the same answer must be introduced in the last note of the proposed subject, if that is possible, or nearer the last note; and the answer being introduced, the first part must proceed upon the same answer, with some different melody, which may correspond to the proper harmony; after which, the response being compleat, if there follows more, of two or three parts, the preceding parts must go on still with some different melody upon the responses of all the following parts, which melody must have some little connexion to the first subject; or, instead of simple melody, may be introduced what is called a contra subject, upon or near upon the same proposed subject; and, after all the parts have done, and passed every one the subject and its contra subject, they must all together make a cadence; which ordinarily is in the scale of the fifth note high of the first proposed scale, being its nearer scale in the progression of harmony, and the same cadence may be of terminate or indeterminate harmony at the pleasure of the composer.

If the same cadence is of terminatae harmony, ordinarily the first subject is repeated, in the middle of which, if it is possible, must follow the contra subject; or, when there is a contra subject, it may be proposed first, and for its answer the first subject; but if the answer cannot be introduced in the middle of the same subject, or contra subject, the subject may be shortened to introduce the answer sooner than it was done in the beginning of the fugue, or imitation. But the proceeding in these fugues and imitations, being made in almost infinite manners at the pleasure of the composer, and the description of these different manners being not possible to be done in a small compass, as before-said, consequently an example to be explained will be the shorter way, and more profitable for knowing the proceeding of the above fugues or imitations: for this purpose we have chosen the first fugue, in the first allegro of the first sonata, a violino solo, opera 5th, of *Carelli*, the beginning of which sonata was explained in the ninth article of the antecedent chapter. The above fugue is composed in the scale of D, with its third sharp: the first note begins in the unaccented time of the measure, ascending gradually from the third note of the scale to the fifth note, from which it descends a fifth, which is the note D octave of the principal D of the scale; in which manner making a bass cadence, the above note D is properly the end of the subject; but, for the sake of introducing the answer of the second part, the above subject is augmented with another different subject, which serves as an half part of the total subject, and also as a melody for uniting a contra subject, which forms the end of the intire subject proposed, and the above contra subject lines the responce of the second part, which is done in repeating the proposed subject in the fourth note below, which is C sharp, third note to A guide to the chosen scale D, after the same second part has repeated the first, and the second part of the subject, has been added some notes in half a measure for returning in the accord of the principal note D, passing into the third part of the subject, which makes the contra subject, giving at the same time the opportunity of introducing the third answer performed by the bass, as a third part, beginning the same answer in the last unaccented time of the fourth measure, continuing as was done by the first part, at the end of which he makes a perfect cadence in D, repeating after the contra subject done by the second part; but, instead of keeping the harmony in D, as was done by the same second part, he passes B as guide to the following note E, which, as principal guide tranposes the harmony in A, having the superior part in the middle accord as it were a fourth part, repeats the subject in the accord of the above relative guide B, passing immediately into the principal guide E, making the cadence in A, with only the first part of the subject; and, with the second part of the same subject, continues in the same accord of A, not as principal, but as guide to D, in which they fall with the end of the same second part of the subject, after which immediately follows as before a fifth part, which repeat all the subject, as has been done in the beginning by the first part, but in the lower octave; and the bass, under the second part of the subject, makes the contra subject, joining with the same the beginning of the above subject in the accord of the guide A, as being a sixth part; and at the end of the second part of the subject, and under the third part of the same, the bass, as being a seventh part, repeats another time the subject in the accord of the principal note D, making the cadence in A, as guide to the same principal, with the first part of the subject continuing with the second part of the same; at the end of which is repeated the same subject in the accord of D, by the same bass, but at the lower octave, as being done by an eighth part performed by a supposing contra bass or organ, the subject being disposed in the above manner as it were in eight parts, terminating with the cadence in the principal note of the chosen scale D. (See the same fugue described in example xviii. plates 55, 56, 57, and 58.) After the above cadence in D principal, the first part begins another different subject, which indeed is the same as the first, but with diminished notes, which is followed by a second part, and successively by the bass; after which is an interval of melody in imitation of the first contra subject, continuing in the same imitation for two measures and a half, after the repetition of the above diminished subject in the accord of the guide A, accompanied by the first part with the contra subject, which makes the third part of the first chosen subject, after which the same part immediately answers to the diminished subject of the bass, in the octave of the same accord of the guide; and directly

directly the second part answers to the same diminished subject, but in the accord of the principal note D at the lower octave, to which follows, as being two and three parts joined together into the violino, giving the accord to the bass, which moves by skips, of guide and cadence, but diminished with cromas or quavers, all together making a perfect cadence in B; after which follows an arpeggio, by three superior parts joined into the violino, the bass continuing with its diminished skips of cadence, or of guide, for above nine measures, at last making the cadence in D; but the violino continuing the arpeggio, the bass accompanying it, but with simple notes, 'till the same cadence in D is repeated; after which the bass repeats the first beginning of the subject, to which is answered by the same bass as a tenor, but the violino begins a melody, as being divided in two parts; the first proposes a subject in the accented time of the measure, and the second gives the answer into the second quarter not accented of the same measure, continuing in this manner for four measures, after the two parts change the melody in a kind of arpeggio performed by distinct skips, which also may be supposed, divided in two parts, the first part in the first division and the second part into the second division, making at last the cadence in A, and immediately, as a simple part, the violino proposes the beginning of the subject in the lower part of the octave of the chord A, which, instead of being answered, another upper part proposes three simple notes of the same subject diminished, to which directly is answered by a supposed other superior part with the same three notes, but transposed into the chord of D, to which the bass instantly follows with the same entire subject diminished, in the chord of D passing in G, and after in A as principal of indeterminate harmony, from which it is changed by its relative guide E, into the guide A fundamental and stable, as a pedal in the organ, keeping firm under the parts in the fiddle, which gradually passes in arpeggio the notes of the accord of the principal D, to that of the guide A, in compound harmony, from which the first part passes with an *esfugita*, as it is called in *Italian*, into the simple accord of the guide, making at last the terminate final cadence, (see the above fugue in the mentioned example xviii.) The fundamental bass has been added in the beginning in two different manners to the common bass of the above fugue, not only for to shew directly the progression, and the construction of the same, but also for a more abundant instruction of the different relations between the combinations of sounds, and its progression in figured and in fundamental harmony; shewing the relation of all the syncopes, diminutions of notes, and skips passing from one part to another in the figured harmony. In regard to the composition of the same fugue, it is evident, that not only the very same subject, but also the progression, or (as commonly called) the modulation, is of a very dry nature; the melody of the subject being very indifferent, and its progression being repeated above eight times successively, continuing always only in the two principal chords of its octave, surely it cannot be supposed that the same progression be too much varied, and only properly fit for church-music, but not for what is called music of camera, or other public and private diversion. But, considering the undertaking of putting two or more parts joined into the compass of one fiddle, and the variety which has been used in the management of the same subject, in repeating them sometimes in the octave high and low, and sometimes all the subject, and sometimes only one part of the same; all that made not only excusable, but laudable, and prettily pleasant the above composition; in the middle of which has been also intermixed some different melody, and some harmony with arpeggio, all very proper to the principal subject.

From what has been said, the student of the harmonic art may know the construction and continuation of fugues. It must be observed, that when the subject of a fugue, or imitation, is chosen, and followed by its proper answer, if the student will put under the same subject and answer its fundamental bass, with all the combinations simple, compound, or full, which can be afforded by the bass, in observing all the different accords, and in diminishing their principal notes in divers manners, he will certainly find some melody which may serve as a contra subject proper to be intermixed with the composition, or follow the same first subject, as we have seen in the above explained fugue of *Corelli*, in which the contra subject follows directly the subject, and the same contra subject may be under the same subject, being composed

composed in its fundamental accord, must also be observed the manner with which has been diminished the same first subject producing a different subject, and may be also observed the last allegro of the same sonata, which is composed by the same subject in fugue, only differently diminished, and put in the proper order respectively to the difference of the measure, which in the last above fugue is in triple time. And for a sure practise of the management of the fugues and imitations, it must observe not only one, but many of the best authors compositions, examining attentively their manner of proceeding in their subjects, contra subjects, combinations, and progressions, in fugues and imitations, and their divers melodies introduced betwixt them, particularly in what is called fugue real, as the answers to the subjects of the same fugues are not always regular. In the above manner, and with a competent practice of the management of all sorts of fugues and imitations, the student in the harmonic art will in time find very easy all sorts of compositions harmonic.

N.B. It must be observed that the fundamental bass may be put in divers manners, under and to the same simple melody, with its proper and different accords, by which the progression or modulation is changed, as may be seen in example xix. plate 59. in which the natural scale is expressed in ascending and descending with different fundamental basses; it must also be observed, that the fundamental bass proceeding with the auxiliar perfect skip, joined with the perfect consonant skip of cadence (as it is expressed in the third bass of the same example xix.) is not the proper progression for only two parts, because with the same progression the combination is formed by unisons or octaves in the accented time, and divided only by the third in the time not accented (as it is between the bass and the notes of the ascending scale) without the third in the accented time, and always without the fifth, the harmony becomes empty in the accented time, which is the best and most sensible in the progression: but, in three and four parts, as it is in the said above example, in which in three parts always the third subsists in the accented time, and the fifth in the unaccented, and better in four parts, where the combination is complete, consequently the same proceeding of the above third bass may be used at pleasure. The proceeding also with the skip of cadence, as it is done by the fourth fundamental bass under the same natural scale descending, expressed in the above example xix. plate 59. is improper under the simple notes of the descending scale, being the combination only by fifth and octave, without third, and consequently unharmonic, but when it is joined with all simple accord, may also be used freely.

ARTICLE IV. *Of Canons.*

CANONS may be called perpetual fugues, or imitations, because they are composed upon a simple subject of melody, without being mixed with any other melody, which subject being introduced and terminated by a first part, the second part follows immediately with the same melody, and the first continues in the same time another melody, which may be proper to the same first melody, and the second part continues the same in its progressions: if the canon is performed by many other parts, all proceed in the same manner, consequently the melody or subject being introduced by the parts, one after another, all the parts cannot but end together all the subject. The composition of these canons consist in chusing a melodious subject, at the end of which must be introduced the same subject by a second part, with the same notes at the unisons, or transposed in whatsoever sounds of the chosen octave, as at the second, third, fourth, &c. at the pleasure of the composer; upon the notes of this second part must be continued, by the first part, a proper melody forming the continuation of the proposed subject, which melody is after repeated by the second part; under which, if another following part is introduced another time, the first beginning proposed by the first part, to which the same third part follows always the first and second part in the same proceeding with their melody; and the first part composing always a new proper melody upon the under part till at the end of the song or tune, after

after which the same first part immediately begins another time the proposed tune or song at the time that the other part continues its respective tune or song till finished, at the end of which it begins the same again. For to find out the proper harmonic melody to the following notes of every one of the parts, the same beginning of the tune proposed must be united with all the compound, or full harmony, which can be supported by the beginning of the same tune or song proposed; and from this composition and reversion, will be found out all the changes that may be done in the proposed subject. It has been mentioned that fugues and imitations are only proper for instrumental, and not for vocal music, as will be clearly shewn by the reason that will be produced in the article of vocal music. On the contrary, the canons are only proper for a simple diversion in vocal music, and not for instrumental; these canons being ordinarily extremely dry, consequently they cannot afford great pleasure to the sensation; but in the vocal, the same words, which ordinarily are comic, supply the dry progression of the canons. The canons only in two parts are more easy and pleasant, because they may be composed with some varied progression, as it is to be seen in example xxi. plate 61. but in four parts are always dry and the words confounded. The example xx. plate 60. is in four parts at the unison in the scale of D natural third, divided in time *alla breve*, as called by musicians. The first part begins a melody in the first measure, and the second part answers the same melody at the unisons in its first measure, which is the second measure of the first part: The third part also in its first measure (which is the third measure of the first, and the second of the second part) repeats the antecedent melody proposed by the first part in the beginning, following after the same melody at the unisons, as it has done in the second part: The fourth part follows in the same manner as the other antecedent parts has done, following successively the same melody proposed by the first part, and every one terminating their melody before every one of the successive following parts; every one repeats immediately the same melody one after another, as they have begun, continuing repeating the same at pleasure, putting at last the end, as it is marked in the same example xxi. plate 61. In this example it must be observed, that the melody of the canon has no other progression but only successively passing from the notes of the accord of the principal note of the scale D to those of its fundamental guide A, every first half part of all the measures belonging to the accord of the principal, and the other second part to the notes of the guide; the fundamental bass passing in every measure from the principal to the same guide. That has been done expressly for an easy and clear explanation of that, which must always be observed in continuing the composition of the melody with its proper reference to the following parts, and to the fundamental bass; and by this observation is known how many changes may be supported by every note of whatsoever proposed combination, as it is apparent in the same canon. It must also be observed, that a canon in four parts at the unison, the progression cannot be altered till past the last measure, in which the last part puts an end to its melody, but after all the parts have terminated their melody or song, the progression may be changed, and continued in another scale with a different melody, which may properly be united with the beginning of the first melody; but that brings the canon very long and improper for a composition, which serves only as a tune, or song by memory, for a simple diversion in a garden, room, or street.

ARTICLE V. Of Cadences.

IN the first book, chapter iv. articles i. and ii. it has been explained, that all progressions in music must be done by the harmonic combination of the sounds belonging to the first principal notes of the scales, and to their fifth notes, which are the fundamental guides of the same principal notes. To these two principal notes have been added two other notes, which serve both as auxiliar to the two other above-mentioned, and these added notes are two thirds, one below, the other above their first principal notes. From the motions of these above four notes, the two principal, and the two auxiliar, which are the places of the fundamental basis, all progressions in music are made by continuall cadences, as it is clearly apparent by all the canons of the harmonic code; therefore the composition of music may be defined an harmonic progression of divers cadences, *viz.* simple, compound, and broken, and are distinguished in different manners; first, in perfect and imperfect; the perfect cadences are the product of the perfect consonant skip of a fifth low; and the imperfect cadences are produced from the other consonant imperfect skip of fifth high. Secondly, in terminata and indeterminate harmony: The two above perfect and imperfect skips, may be both of terminata and indeterminate harmony. The cadences arising from the two auxiliar skips are all of indeterminate harmony. The terminata harmony composes the final and middle cadences. The final cadences are those which put an end to the composition, and the middle those which terminate some particular periods in the course of the composition. The final cadences must be done in the principal note of the scale, in which was begun the composition, accompanied only by the more simple accord, namely in two and three parts, with only the unison or octave; in four parts the unison, fifth and octave; in five parts may be added the third; and in six or more parts may be doubled the fifth and octave, preferable to the third, particularly if it is major, being by its own nature more sensible than the two consonants, as before-mentioned. The manner of doubling the two consonant notes has been shewn by the third canon of the harmonic code. In the number of the final cadences is one, which is imperfect, and it is particularly used in church music for distinction of the old eight *Greek* modes in authentic and plagal, as has been explained in the introduction. This imperfect final cadence, instead of descending from the fundamental guide, descends from the fourth note to the principal; but this final cadence, which is done ordinarily immediately after the perfect cadence, must be in a very slow manner, by which is shewn that it is a final cadence. The middle cadences are the same as the final, and may be done in three and four parts, with the addition of the third, when it may serve for the progress of the harmony. Sometimes these middle cadences may be imperfect, deriving from the consonant imperfect skip of a fifth high, and are called suspended cadences, because they stop at the fundamental guide, without descending into the principal note of the octave. These sort of suspended cadences are used and applied to some particular expressions, as points of interrogations, admirations, or exclamations, and more frequently in the recitative manner; which sort of cadences being of terminata harmony, must also be done with simple combination, which is with the major third, perfect fifth, and octave. All other cadences, perfect and imperfect, which are compounded with the 7th, 9th, or other superior thirds, are all of indeterminate harmony, which supposes the continuation of the harmony for the resolutions of the superior thirds, called discords by musicians, as has been mentioned in the above chapter iv. article i. By these diverse cadences is done all sorts of fundamental progressions, as before-mentioned; but is not so clearly perceived in figurate music as it is by the fundamental, because the parts and the basis moving in different manners, inverts the original fundamental combination, as it is explained in the first chapter of this present book, and by this means breaks also the order of the fundamental cadences, in which order of the same fundamental cadences the common basis must be at last united; but it happens sooner or later, according to the pleasure of the composer: Therefore all inverted cadences may be called broken cadences; between these broken cadences is one which apparently differs from the others, and is broken by

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the motion of the bass, when is formed the combination simple or compound, upon one of the fundamental guides of whatsoever scale; which guide, instead of passing into the principal note of its octave a fifth low, or a fourth high, passes immediately to the next successive acute note, breaking in this manner the true cadence; which kind of cadences may be called deceptive cadences, derived from the supposed motions of the auxiliar skip of third low. As for example, the bass being in G, which, supposing the natural scale of C is its fundamental guide, and instead of passing and making the cadence in its principal note C, passes, ascending a note to A, as a relative scale; but as a fundamental bass cannot proceed by joint degree, must suppose that the latter end of the bass note G is changed into a common bass, as being in the third note of the relative guide E to A, and the fundamental bass as descended from G to the same relative guide E for passing to A, with the proper and just skip of cadence.

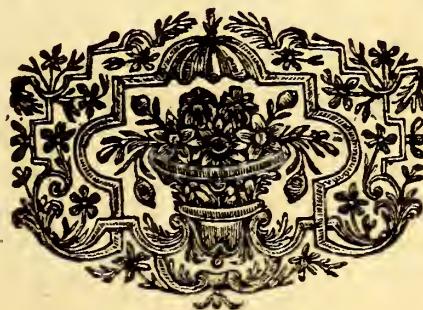
These deceiving cadences are like the broken cadences, which derive all from the gradual motion of the common bass, all depending from the auxiliar skips; only the ordinary broken cadences pass successively from one note to another, without keeping the antecedent note in one accented time as it is done by the guide: But the descending perfect cadences keep the antecedent note, as properly a fundamental guide divided in two, the one accented, the other not accented, passing after into the next note, which also is in accented time. See the examples i. ii. iii. iv. and v. plate 62. by which are delineated and expressed all the above sorts of cadences. For composing the same cadences, the final cadences must have the guide in two times, one accented the other unaccented, as above-mentioned, particularly in grave or adagio time, the accented part may be in compound harmony, and in the other following unaccented part it must for the better being resolved the compound into the simple harmony, passing after into the simple note, as it is expressed in the first example, plate 62. The middle cadences may be sometimes done in a manner which may be called a flying cadence (as those which may be seen in the second example of plate 62.) but very seldom, particularly in vocal music, because when the cadence is at the end of a terminate period, this cadence must be regularly and sensibly done, observing the expression of the song and the value of syllables. The broken cadences properly are made by all the notes which compose the harmony, when those notes instead of passing with their following notes into their proper fundamental places, syncopes the first note, or passes into those of a different scale, relative, or principal may be, as may be seen in the third example of the above plate. The fourth example shews the deceptive cadences, and the fifth the other cadences, called suspended, as above explained.

ARTICLE VI. Of Accents.

MUSIC has its proper accents as well as discourse. The accent in speaking, may be distinguished into three principal significations; one in regard to the sense of the words and periods, the other to the pronunciation of syllables; and the last to the distinction of the periods. The first is performed by the flexibility of the voice, in changing the sounds a little from the grave to the acute, or *vice versa*, according to the diverse sense of the words and periods, and conformable to the custom of the diverse particular languages; and this flexibility of the voice, being diverse, and in almost every language, cannot be expressed in writing. The second signification regarding the pronunciation of the syllables in short or long, as every one knows the language of his own country by common habitude, consequently only some equivocal syllables are marked in writing by some accent, which are called acute, grave, and circumflex. The third signification, which regards the division and distinction of periods, must necessarily be expressed in writing by some points, columns, commas, and points, by which the different little rests, which in speaking must be used between the different periods, are perfectly known. Besides these signs referring to the distinction of periods, some others are used, which not only serve to the same distinction of periods, but to distinguish their particular sense, and they are called points of interrogation, admiration, and exclamation,

exclamation, by which, in speaking, the flexion of the voice is appropriated to their particular sense, in a little different manner from that which commonly serves to the sense of the other periods. The same may be considered in music; but in a manner some-what diverse, but more just and perfect. All the above different significations are distinctly and properly indicated by the divers notes, and other different signs, which notes and signs are all delineated in the plates 4 and 5, explained at the end of the introduction; to which notes and signs the flexibility of the voice, the pronunciation of syllables, and the different distinction of periods, must exactly be conformed. The notes, with their value in the measure of time, are all expressed in plate 4, and described in ten figures. The first figure has the longest in time, and the tenth, which is the last, shews the shortest. To every one of the same notes, immediately follows the number of measures, or parts of the measure, which shews the value of the same notes, and under them the different signs, which indicates their respective rests. The ascending, and descending of the above notes, as it is expressed in the examples iii. iv. and v. plate 5. denotes the diverse flexibility of the voice, done in its proper time, which time is denoted at the beginning of the composition with its proper signs, as are expressed by the first and second figures, plate 5. and in regard of explaining the notes, as allegro, grave, or adagio, the same sense of the words gives the direction of it; but the instrumental music being deprived of words, the terms adagio, grave, and presto, which belongs to the measure of the time, and the others which relates to the expression, as affetuoso, allegro, or vivace, andante, sciolto, or legato, must be always noted at the beginning of the composition under the sign of time. In regard to the pronunciation of the syllables, long, or breve, the same notes which divides the measure of time, must be put in one proper order, by which the pronunciation may be done in a proper and easy manner for expressing the long and breve, and at last, for expression of the distinction and divisions of periods, are the diverse sort of cadences, as are explained by the antecedent article; or, instead of them, the divers rests as are noted under every note described in the above plate 4. which indicates the pauses, or rests, which must be betwixt one period to another. We have seen in its proper place, that time in music, and their respective measures, may be divided in equal and unequal parts. The time alla breve, a capella, or common time, and their other derivations, as $\frac{2}{4}$, $\frac{4}{4}$, &c. are all divided in measures, which may be sub-divided by equal parts; on the contrary, the measures of triple time are divided by unequal parts. The measures which may be divided in two equal parts, have their first part accented, and the second part unaccented; when the same measures are divided in four parts, by four equal notes, the first note and the third are accented, and the second and fourth not accented, as it is distinguished in example vii. plate 62. but when the second note, which is unaccented, being ~~coudeek~~ in two notes, the first of the two becomes accented, the second unaccented; and the first part of the measure being divided by four equal notes, the first and the third are accented, the second and fourth notes not accented, as it is expressed in the above plate 62. example viii. where every note is marked with their particular sign long, or breve, expressed thus (— long, o breve) and the general rule is this, that all notes of whatsoever but like value, joined together, the first is the accented, and the second unaccented, computing in the same manner the following notes, so far as they continue composed by the same value; but the principal accents are always two, the first is in the first note of the measure, which may be considered as the very first principal, and the second accent which also may be considered at the second principal, is in the first note of the second part of the same measure. In triple time the accent falls somewhat different into the notes of their relative measures. In the times divided by the signs of equality before spoken, being the accent principally considered in the first note of the measure, and also in the first note of the second part of the same measure; consequently all the middle and final cadences may be alternately in both of the same two principal accents, but in time of triples, the first accent, when the measure is divided by three equal notes, is in the first note, and the second accent is the last; the middle note being consequently unaccented, as it is expressed in example ix. of the above plate 62. The middle, and particularly the final perfect cadences must have their last and final notes in the first accent of the next measure; and this is a general rule which has an exception when the tune or air

is composed for the dance; in which, beginning the tune by the first note of the measure, consequently the last cadence being obliged to pass immediately to the same beginning of the tune, is also obliged to have the last cadence in the second accent of the measure for repeating immediately the tune; and in this case, the above general rule is sacrificed to the dance, as has been formerly and commonly done, and it is to be seen in some triples of Corelli's operas: But in rigour of musical accent, it is always abusively done. In the same triple time, the second accent is not enough for a perfect cadence, and at least must be employed the second note of the measure joined with the third note of the measure following the last note of the cadence in the first accented note of the next measure; and for final cadence, the best is when all the three notes of the measure are occupied by the fundamental guide. The perfect cadences are the more pleasant after an harmonic progression, which is done (as has been seen in the antecedent article) by a continuation of broken, flying, and other divers cadences, consequently in all sorts of time they must be done in a very sensible and melodious manner. In vocal music, its accent must be conformed and joined to that of the words; but in instrumental music, being deprived of words, the accent is easily mistaken and misplaced, particularly by the composers who has had no better master than his own genius, or practice of the harpsicord. It has been repeated that musick is composed by way of diverse sorts of cadences. These divers sorts of cadences are to be considered in some gradual order. The principal cadences, the perfect and imperfect, consonant and fundamental cadences must be placed in the first order; to which may be added the suspended cadences, and the deceptive, or false cadences; the flying cadences may follow as second in the same order, after may be continued the same order for the divers broken cadences, giving always the preference to the bass note, which is nearer the fundamental, as it is the third note following the fifth, the seventh, and the other superior thirds, by which are broken the perfect cadences; and in this manner the accent cannot be misplaced.



C H A P. III.

ARTICLE I. The Division of figured Harmony.

HE figured harmony, or common music, may be divided, and distinctly considered under three different denominations; namely, vocal, instrumental, and local. Without voices, or instruments, harmony cannot subsist. A written composition of music may serve for the eyes, not for the ears: Consequently the voices and instruments are the necessary productions of harmony, bad or good. The vocal music may be called natural, because the power of it has been implanted in men by the very same nature, as mentioned in the beginning of the introduction; and the instrumental may be distinguished and called artificial, being invented by art. The local music comprehends both vocal and instrumental separately, or joined together, especially applied to the property, decorum, and taste belonging to the different places in which the music is to be performed, as will distinctly be shewn in its proper place.

ARTICLE II. Of Vocal Music.

WE have just above mentioned, that the power of singing, cultivating, and performing music, has been implanted in men by the very same nature: But this power was proportioned to the particular constitution of every one, from whence it happens, that one has a better voice, disposition, taste, and more love to music than another: Notwithstanding every one possesses the same general power of making music with his own voice, bad or good. The music produced by a good and proper voice for music, is infinitely superior to all music that may be produced by any instrument whatsoever; because the best instrument can only produce sounds, but a voice may join his musical sounds to the discourse; and when it is properly adapted, both together acquiring an extraordinary power, becomes absolute arbitrator of the human passions, and made wonder and miracles as it is reported by so many old and modern historians. But this power falls very short when music is not well, and properly applied to the expression and sense of the words; and notwithstanding that the music may be composed by an excellent artist, but indifferently adapted to the words, may be only considered as simple instrumental music, fit for pleasure, but not for affecting and moving the human passions, because the excellence and superiority of the vocal music consists only in giving weight to the speech, which cannot be done without the excellence of the harmonic art being properly joined to the expression of the words; and this (if we will distinguish the art) is what may be called the only science of music: Therefore in this sense music may be defined a perfect emphatical expression produced by an excellent combination of sounds and words: Consequently to possess this science of music, it is necessary not only to possess perfectly all rules of combinations and progressions harmonic, but all the different impressions which may be done to sensation by the various motions, combinations, and progressions gradually, or by skips; to distinguish the properest airs which are to be applied to the different senses, as pathetic, brisk, or languid, in their proper time, flow, or quick; for example, a skip of the fifth high, in quick time, is more proper for some lively expressions, than skipping a fourth low, which is the same consonant found at the octave low, which skip may better serve for pathetic and doleful expressions in flow time: And because the vocal music is performed by different voices, as *Sopranos*, *Contraltos*, tenors and basses, every one of which have a different propriety; consequently are not of a little advantage, when it is in the power of the composer to make choice of the most proper voice for expressing different compositions of the words. The *Sopranos* being of the acute voice, are the more proper for the quick movements, and these for the expressions, merry and agreeable. The *Contraltos* having their voices less acute, and of sweet tone, may be employed in the pathetic

pathetic and amorous stile, and other slow movements. The Tenor partaking of all particularity of the other voices, may serve in all gay, brisk, grave, and resolute movements, and particularly in simple narratives which are done under the terme, or moto andante, by the *Italians* called *arie perlanti*; which in *English* signifies a manner of speaking. The Bass being a more grave voice, is not proper for quick movements, not in the very adagio pathetic, but in the middle of those two extremes, as largo, andante, risoluto, and staccato; the properest motions of melody for basses are skips, also by their gradual divisions, or diminutions of notes. To the tenor voice all motions are proper. To the contraltos it is the softenuo and firm notes, also some few skips, but not too much distant in accuteness or gravity; on the contrary, the softenuo, and firm notes, are not proper for the soprano voice, but the moving and diminished notes are more proper. These may serve for general rules in distributing the music to the voices, which may have some exceptions on some occasions. After all that has been said above, a little knowledge of the art oratoria, or poetica, will certainly be of no little service for adapting the properest sounds, simple or combined, to the various expressions, as narratives, interrogations, exclamations, lamentations, conclusions, and all other sorts of declamations. But at last the composer should put himself into the same passion into which he would move his auditors by his compositions; this may serve for a general rule to be depended on, because the enumeration of all observations in the divers applications of sounds in melody, and combined in harmony to the just expression of words, is of so much extension, and subject to an infinity of distinctions, all which cannot be compassed in a moderate space. But every one may take care of knowing them by practice, and by his own private application.

ARTICLE III. Of Instrumental Music.

THE instrumental music cannot pretend to equal the vocal, to which it is only a copy, and a copy in miniature, without any obligation of observing the rules mentioned in the antecedent article, belonging to the same vocal music, as derived from the science supposing the art divisible, all expressions being arbitrary to the composers: Nevertheless the instrumental has an honourable prerogative, having been in some manner the cause of the perfection of the vocal. With only the voice, and without instruments, it would have been almost impossible, not only to compose a perfect scale of musical sounds, but also of repeating a like sound which some time before was pronounced; because sounds are simple sensations, produced by the motion of the air, which vanishes away, the sensation also ceasing immediately, and the same sensation cannot be printed in the memory, but we may have the remembrance of having heard a sound, which cannot easily be repeated in the same pitch after some little time past.

We have seen in the Introduction, that not only the first *Greek* poets, but also the *Roman* orator *Gracchus*, has been obliged to make use of instruments, only to keep the voice in a proper and just tone. Now notwithstanding at this day the performance in music is arrived to its *ne plus ultra*, it is very difficult to the performers to keep their voice in the same pitch without instruments, as has been tried many times by three or four singers beginning a song in a fixed pitch, following singing without instruments; after the space of three or four minutes, in sounding the first pitch, they find the voices all fall down into the grave, and that in proportion to the quantity of time they continued singing. But not only the vocal music in particular is obliged to the instruments, but the whole harmonic art, it being evident, that without a perfect scale of sounds, the melody should have continued in its imperfect beginning, and the harmony never should have been produc'd; being more than probable, that neither *Guido* nor others should have been capable of finding out the simple beginning of harmony without the help of the organ, the performance of which has been known not only by the same *Guido*, but also by others before him. All that is admirable in the ordinary disposition and oeconomy of providential nature, which has given to men the power of producing and cultivating music, and to the same power has joined some particular instincts

instincts for inventing instruments to imitate the human voice in singing, without these instincts music should never have ripened to perfection. Now returning to the performance of instrumental music.

The composer is absolute master of chusing what melody or harmony he pleases, but always rigorously observing the laws or rules of the harmonic art. The instrumental music being fit only for pleasure, as before-said, and not having occasion of some greatest performance, as the vocal music, consequently it requires not a supreme skill in the harmonic art; the more simple it is composed, the better it pleases the public. A good melody, carried in four, or not more than five real parts, makes a better effect than full harmony, in which must necessarily be employed a prodigious quantity of performers for its good effect. The harmonic progression of an allegro, when it is the more simple and natural, is best received by the public, as may be observed in the compositions of many of the best authors. The allegro, and also all quick movements, are not capable of uncommon combination of sounds, as those which by *Italians* are called *acciaccatures*, these may better serve in the grave and slow movements. All melody allegro, grave, or pathetic, may be partaking a little of the taste of those which serve for dances, and those are the most pleasant to the public; as for example, the movements of jig, borree, correntes, for the brisk and lively; of sicilianes farabandas for the adagio, or affetuoso; and of minuettos for the allegro gratioſo. Here must be remembred what has been before-mentioned in regard of the divers terms added to the compositions, and particularly of the term allegro, which generally is very little understood, being considered as of quick and lively movement, but is very different; this term allegro regards the manner of expressing the notes, but not to the measure of the time; and when the said term allegro is only put, it must be understood as in common time, or, as it is called by the *Italians*, a giusto time, with the expression merry, but not brisk: The same of the other terms, as gratioſo, amoroſo, vivace, spiritoſo, andante, and ſuch other like, all which regard only the expression of music; only the term presto, and adagio, and giusto time, regard the measure of time; and the term grave regards both for the expression and time, as adagio with an expression grave. It must also be observed, that the instrumental music may be performed not only for public or private diversion, but also in the church, as betwixt ſome psalms, or other vocal performances; in which caſe the instrumental must be composed in the ſtyle proper to the decorum of the ſacred place: For doing this it will be useful to look into the compositions of thoſe authors who have composed concertos and ſonates proper for the church: It must also be observed, that the instrumental music for churches may be composed with a greater and more full harmony, being moſt proper for the grave and majestic, which is indiſpensible in all churches. But this is not proper when the music is not deſtined for churches. The more ſimple music, with a pleasant melody, as before-mentioned, is always the best for public and particular diversions, conforming to what may please the public, which ordi‐narily are ignorant of the harmonic art; and notwithstanding all pretend to be not only lovers of music, but also connoiffeurs therein, it frequently happens, that the learned and acquainted with the ſame art, which are generally the leſſer number of the assembly, find themſelves obliged to follow the greatest part of the audience.

ARTICLE IV. *Of local Music; and, first, of sacred Music.*

TH E Composition of music must be always done not only according to the quantity and ability of the performers, and to the genius and general taste of the country, but also to the propriety of the diſtinct places where it is to be performed, as church, heroic, and comic theatrical music, and chamber music, which are all comprehended under the title of local music. Every one of the above kinds of music have ſome diſtinct peculiar rules to be obſerved, besides the common rules of harmony:

Sacred music in the greatest churches, particularly of the *Roman* and *Ambrosian* communion in *Italy* and in *Germany*, as metropolitans, cathedrals, and colleges, is commonly divided in ferial or coral, in simple and double festivals and solemn. The coral or ferial in simple canto fermo, as it is called, is performed on every common day called ferie, by all the assistants to the great choir of the church, as canons, chaplains, and prebendaries. The simple festival is so called, when on some ferial day happens the commemoration of a common saint ; and the prayers, psalms, &c. are sung partly by the assistants of the great choir, as above, in canto fermo, and partly by musicians in canto *Gregoriano* harmonized, in three, four, or more parts. The double festival is performed in figured music, almost all the prayers by musicians, with the addition of one motteto for one, two, or more voices, in commemoration of the particular saint ; and the solemn music is practised in almost all the churches on the occasion of some particular great feast, as for thanksgiving to the Almighty with a solemn *Te Deum*, being a devout and religious custom for some public remarkable success, or for the dedication and consecration of the church, or on some other great occasions, in which the composition and performance of music is done in the most solemn manner possible. To this great and solemn music may be added some sacred poetic compositions, commonly called oratorios, the music of which is ordinarily performed by only four, five, or six voices, with a number of instruments of all sorts, in a majestic manner. These oratorios are composed for a feast of some particular saint, and particularly for the solemnity of *Christmas-day*. These performances are continued for nine successive evenings before the day of the feast, or for eight successive evenings after the same feast. The composition of these kinds of music are not obliged so rigorously to keep their melody and harmony in a grave order, though very modest and more natural ; but they may be composed in a way more free and expressive, not only in the composition of the diverse recitatives, but also of airs and choruses, which ordinarily are composed in a manner called madrigal ; notwithstanding all must be regulated to the decorum of the sacred place, particularly in the melody of airs, which must always be very far from the taste of the dance ; except the music composed for the solemn day of *Christmas*, and its novenes or octaves, in which may be introduced some song, air or choruses, composed with the melodies in imitation of some dances commonly played by bagpipes, as it is generally the custom in *Roman* churches, expressing in that manner the mirth and chearfulness of the shepherds in receiving the annuntiation of the nativity of the Messiah, and by this remembrance a particular devotion is promoted in the congregation.

The particular rules for the application of the harmony convenient to the church, seem that by the same name of church music, there may be enough explained, and by all composers be well understood. Every one knows that the church music is employed in singing hymns and psalms to the Almighty, begging help, grace, pardon, &c. for all the congregation, consequently music being as a deputed orator, must be correspondent to the above ends, and at the same time proper for promoting an humble assurance and devout hope, with a perfect contrition among the congregated faithful. All this must be always present to the composer in composing church music, choosing the properest harmony to be applyed to the divers significations of hymns, psalms, &c. which harmony, as before-said, must always be grave, but humble and modest ; therefore the combination of sounds must be the more natural, also the progression or modulation, without waving from one scale or mode to another, but only passing by the more natural scales, and not frequently ; avoiding in this manner all strong expressions, being directly contrary to the modesty, the humility, and to the necessary reverence of the sacred place ; and as the principal rule of all above-mentioned, not only the sence of the words, but also their pronunciation, must be clearly and distinctly perceived, this rule belonging in common to the composers and the singers, which in this particular the simple successive notes must not be altered, but clearly pronounced, and in the best but simple manner in regard to the expression of the words, without flourishing graces, which are all impertinent and indecent in sacred music : But this rule is the most neglected both by the singers as well as the composers ; every one is possessed with an itching humour of displaying his good taste, the masters in their compositions, and the

performers in singing, without consideration to the just and easy pronunciation of the words, in a manner that the words become only subservient to the music, when it is the music that ought to be subservient to the words; and this is the most necessary rule in all sorts of vocal music.

The masters take care of composing the most studious and laborious pieces of music, full of fugues, imitations, contrafugues, double fugues mixed with simple and double contrapoint, with many long contiles, or divisions, and superfluous repetitions of words and musical passages, but notwithstanding that the harmony may be excellent, and very well adapted to the sense of the words, yet in the same instant of being performed the same good application of the composition must be destroyed, when the pronunciation of the words is confounded by three, four, or more voices, by which every one pronounces different syllables and words. This is the greatest and most scandalous error which has been in vogue from the fifteenth century to this very day. The practice of simple and double contrapoint, with all kinds of fugues, canons, &c. are not only the best, but also the necessary means to attain the perfect knowledge of all sorts of combinations of sounds, and their different progressions, as mentioned before; and the above fugues, imitations, &c. may be practised in public by the instrumental music; but generally for the vocal, as especially in sacred music, all the above sorts of compositions seem to be very improper and indecent, for the reason of the great difficulty of making them without confounding the words. Sometimes the fugues and imitations may be used in the word *Amen*, or *Alleluiah*, because all the sense is comprised in one simple word, consequently it is understood by the first pronunciation; but care must be taken to keep short the subject and its progression, avoiding always the repetition of the same word as much as possible, also the long contilenes or divisions, composed and performed for and by a simple vowel, both these insignificant repetitions and long contilenes being very indecent and irreverent in sacred music. The repetition of words becomes sometimes proper for a greater expression, particularly in begging pardon, grace, or for some admirations of the divine providence, but must be used very discreetly. All these faults will surely be avoided if the master in composing sacred music will imagine himself to be present before God, as a profound humble suppliant, praying for grace, or forgiveness of his sins, or other like, conformable to the words to be harmonized; and in this manner he will find the propereft expressions from the general combination of sounds, and their progression to be applied in every sort of church music, particularly for the choruses, which for the best, must be syllabic, all performers singing and pronouncing the same syllables, which performers may be divided into two, or four churches, when they are enough for a solemn music: From this division, the two or four choruses singing sometimes all together, and sometimes alternately, in the order of their choruses, arises some variety, which may be also adapted to the sense of the words: Moreover there may be composed, in the middle of some choruses, a verse for eight or ten singers, all singing together at the unisons, as supranos or contraltos, in a little chorus, accompanied with the organ at the unison of the voices, or with the immovable fundamental bass in the pedal; without other accord, serving for keeping in tone the voices, which is extremely pleasant, when it is in a proper place; and when the vocal is joined with the instrumental, a greater diversity may be introduced by some divers melody for the instrumental not conformable to that of the vocal, as some fugues, or immitiations to be performed by the instrumental for the same time that all the singing parts proceed with their syllabic harmony; which manner makes an admirable effect, as I have observed in a solemn composition of a *credo* performed by a great number of singers, and all sorts of instruments, in which performance all instruments playing a proper melody in fugue in six real parts, accompanying in this manner the syllabic harmony of the singers till the verse passes *sub Pontio Pilato*; for which was changed the first harmony, and a grave one, and very pathetic was adapted, and after in the following article the *resurrexit*, was repeated the first subject in the same manner of the beginning by all choruses, and continued to the end; and was all performed in a very little time, being deprived of all unmeaning repetitions, and tiresome contilenes or divisions.

ARTICLE V. Of Theatrical Heroic Music.

Theatrical performances have been introduced for representing to the public, and exalting with praises, the heroic actions of some great man, and by this means to stimulate the audience, and particularly the young people, to a strong love of virtue and noble actions; consequently the theatre was formerly a pleasant and diverting school of morals. But this school has been drawn very far from its original design. The cause of this alteration is not so easy to determine. It may be supposed that the inconstancy of time, which continually metamorphoses every thing, has changed the first settlement of virtue (modestly speaking) in a simple diversion: But that is a general cause, which comprehends many others immediate and particular; the principal of which seems to be the insipidity of the very same performance, which also may be derived from other causes, as from the particular negligence or ignorance of the composers of poetry or music; it being evident, that without a good and proper piece of poetry a moving music cannot be done; and the most excellent piece of poetry may be destroyed by a bad composition of music: Also the difficulty of uniting a proper company of good actors and singers, which is the cause that in an opera composed by a perfect master scarce is to be found a moving air or recitativo; to which may be added the little recompence done to the composers, being ordinarily an inferior actor preferred to the composer. All the above chain of causes have changed theatrical performances from their first institution into a simple cover to many other diversions, consequently is not now any more the case of composing a perfect moving piece of music. Therefore the composer of music has nothing more to do, than to look over the poetic piece to be set to music, and to take an exact information of the abilities of the actors in their manner of singing and acting, for composing the music proper to their particular abilities. The master, in composing the music, must remember that it is to be performed by memory, consequently the melody of the airs, also the recitativo, or recital pieces, must be easy, particularly in their progressions or modulations, passing into the more natural scales, relative to the principal, chusing the melody most appropriated to the sense of the words, and particularly the most capable of a clear and distinct pronunciation of their syllables. The invention of the melody to the different airs must be varied one from another, but always in a manner suitable to the sense of the words; and in respect to the recital part, it must be done in an accurate manner, as in speaking, but singing; which recitativos must also be varied one from the other, in a manner that when the same accord of sounds happen to be repeated, it must be inverted in another manner, the hearing often an accord falling in a like manner, as many composers do, without regard to the necessary variety of the music being very disagreeable: Also the end of all recitativos must be conformable to the scale of the following air, when its sense has relation to the antecedent recitativo. But when the air, as it sometime happens, changes the sense of the words from allegro to pathetic, or, *vice versa*, may be passed in a stranger scale, but proper to the expression of the words, notwithstanding that the scale may be improper to the antecedent scale of the recitativo, observing always (as before-said) to give the proper expression with the composition of the music, but in an easy manner, not only for sake of the memory, but also because the greater expression must be compleated by the action of the singer, which action may be lessened when the singer is obliged to be attentive to a hard piece of music. Also it must be observed in composing airs of some special passions, always to chuse the best actor when possible; because very often the composer is obliged to give the part of the greater expression to a bad actor for being the best singer, or for being protected by some gentleman of authority; and this is another cause of the just negligence of the composers, who will not undertake an unfruitful trouble; it being evident that expression only may change the best music into one very bad; but a proper music, when it is well expressed, produces a wonderful good effect, as I have observed on divers occasions, and particularly in the opera called *La Merope*, set to music the first time in Italy by the famous Gassarini, where in one recitativo without instruments, sung by Merope and her son,

son, which with a feigned name, appearing as a stranger messenger to give the false account of having seen his son assassinated, and before he expired, having prayed him to kiss, in his name, the hand of the queen *Merope* his mother, to this purpose, being come to the court: But she, from some internal emotion, by which she was surprized at the first seeing him, supposing her own son a long time dead, and consequently her same present son a stranger, and the assassin of him. This recitativo was full of interrogations, redargutions, exclamations, and other like sort of moving and strong expressions, with the music and the action so well adapted, that the crowded assembly were all so affected as to shed tears. Here, in *London*, in the opera of *Coriolanus*, the music composed by *Attilio Ariosti*, at the scene of the prison, performed by *Senesina*, all the assembly was absorbed in extreme attention and profound silence. Therefore it is evident, that theatrical performances may be restored to its first institution by the contrary means by which it was destroyed, namely, by a good piece of poetry, expressive music, and proper actors.

ARTICLE VI. Of Theatrical Comic Music.

THE comic music was formerly introduced between the theatrical serious heroic music, as for a little merry diversion. It was performed by a comic singer, as fellow-servant to one of the principal parts. Now this use is past, and instead of it, there has been introduced some comical compositions performed by two singers, as before, for diversion, betwixt the several acts of the heroic opera; and these comical compositions are called intermedia, which contains some ridiculous and merry subjects, totally separated from the principal subject of the whole opera. This comical music must be very easy, and not obliged to the rigorous measure of time, to the end, that the singers in charging their proper action, and the expressions of the words, may move the spectators to laughter. The invention of the melody must be proper for it. Not all composers have a proper taste for this kind of music: One may be excellent in all other branches of vocal music; but in comic music his imagination cannot subministrate to him an adequate invention to the comical subject; therefore, the looking into some of these sorts of compositions will be of good use, and of better use in framing them, when it is possible, that will suggest to his own imagination some like inventions.

ARTICLE VII. Of Chamber Music.

THE chamber music may be distinguished in three different sorts, namely, vocal, with instruments, and vocal; without instruments, and simple instrumental.

The vocal compositions, with instruments, are near the same as the oratorios; only the melody is not subjected to necessary local devotion and reverence; also the harmony, particularly in the recitative part, which must be very expressive, and much varied, and consequently it is more liberty to the composer, who may display their good taste without being perplexed by particular rules. This sort of music is ordinarily called, in *Italian*, *serenate*, consisting of six, eight, or more airs, with recitativoes, performed by four, five, or six of the best singers, accompanied by many of the best and properest sorts of instruments, and are performed in some great houses, as of kings, princes, and eminent lords, and ordinarily, in summer time, in the gardens (from whence is derived the name of serenata, as played in an open serene place) on occasion of some nativity, or marriage of princesses and great lords, or other solemn rejoicing. The composition must be very majestic, but merry, and with the best and greatest, or full harmony. The majesty of the composition may be expressed by the vocal parts, particularly in the different melodic choruses; and the melody of the instrument may be merry, with flourishing and diminished notes, or with different subjects united to the vocal melody, or by way of contract in the best manner, all applicable to the sense and pronunciation of the words, taking care that the instrumental may not destroy, but help the vocal in the expression of the words, and their syllables; this being a general

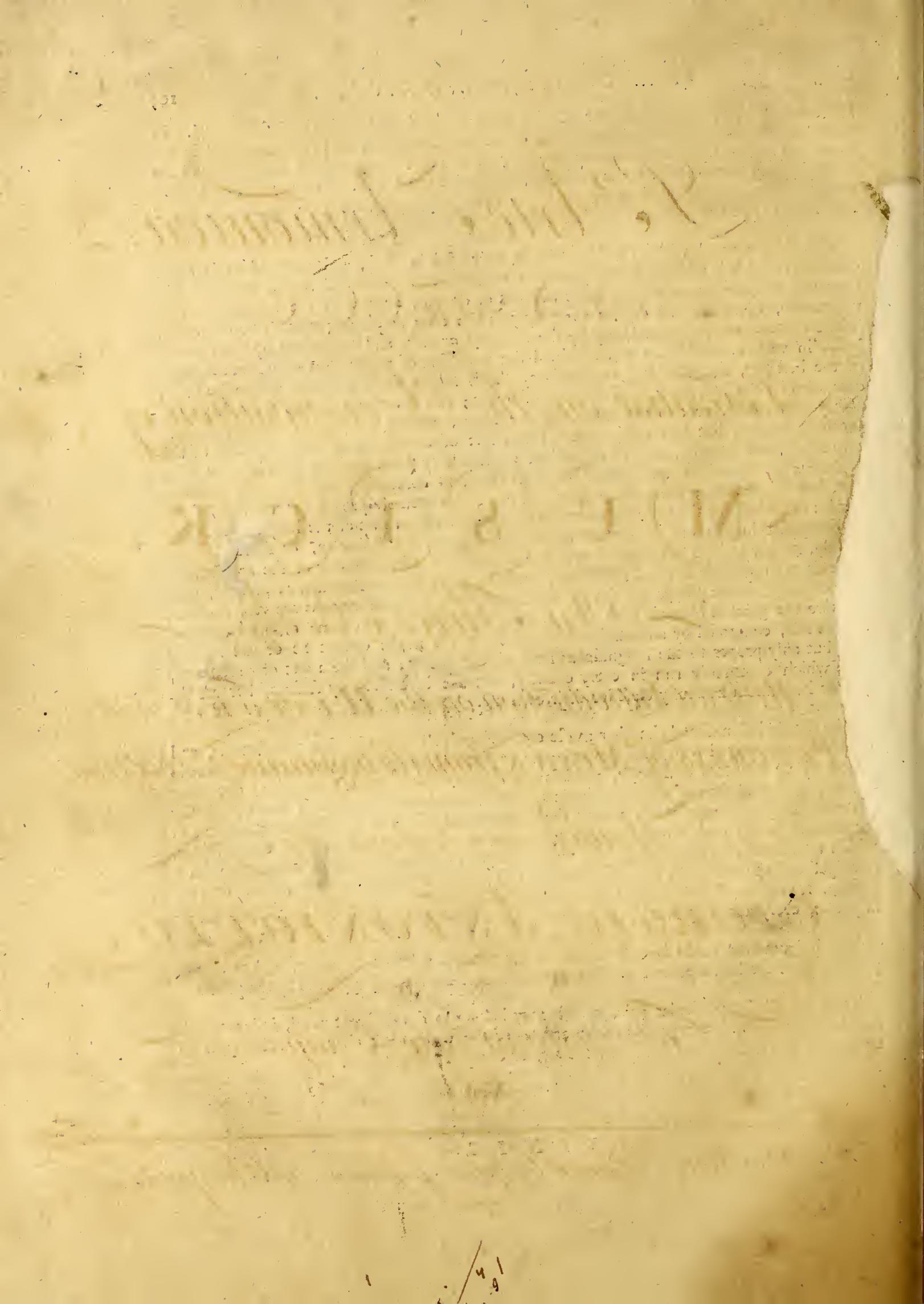
general and indispensable rule for all the vocal music joined with the instrumental. In regard of the recitative, when the vocal part cannot be assisted by the instrumental in the expression of the sense, as ordinarily happens, in this case the composer must give all the more moving expression in the composition of the vocal with the properst and most moving harmonic combinations of sounds in their proper progression, by which the singer may have the best expression.

The simple vocal without instruments is only used in *Italy*, and very seldom in other countries; and it is used in some particular assemblies of lords and ladies, who pass the long winter evenings in singing some cantatas or duettos, only with the harpsichord and violoncello, when the rest of the assembly pass the time in playing at cards or otherwise. These cantatas are performed only by the ladies of quality, and sometimes by some young lords, in which assembly are not admitted the professors of music, but only some stranger of the best sort, and that but very seldom. This simple vocal music is of the best sort, composed by the best poets, and masters of music; and sometimes by the same lords the poetry and music, or also the music by the ladies, among whom are many not only excellent singers, but also composers. These sort of compositions being deprived of the help of the instrumental, and of all action, consequently there must be used all the most expressive combinations, and properst progressions, in composing not only the recitative part, but also the airs; the melody of which must be extremely proper to the sense of the words: The bass for the violoncello, when it is separated from that of the harpsichord, must be composed in the best and most melodious manner, by imitation, or some different melody, proper to help the expression of the vocal part: The harmony of the harpsichord, particularly in pathetic airs and recitativos, must be in as full combination as possible, with its accicaturas, more proper for the strongest expression. These cantatas are very studious, and give the greatest pleasure with their moving affections: But in some ordinary cantatas, a voice sola, composed by an indifferent poetic style, the music cannot be of the moving sort, but only proper to the insignificant sense of the poetry; and these sort of cantatas are those which commonly run in every country, but the best sort very seldom, because the persons keep them zealously close for their own use.

The simple instrumental chamber music comprehends all sorts of instrumental music, and sometimes intermixed with some favourite air or song of some opera; and this happens in almost all the countries of *Europe*, and it is often performed in public assemblies; excepting in *Italy*, where all sorts of chamber music are performed in private, and in those particular assemblies of young gentlemen, where the instrumental music is practised for pleasure and for practice, every one, who is capable of composing, exposes their musical compositions, which are almost all composed for the violino, flute, or oboe solo, or in concertos with a principal instrumental part accompanied by the other instruments; and never, or very seldom, is performed any printed music, excepting some concertos, when they newly appear in public, every assembly being provided with many particular manuscript music.

The instrumental music is only subject to the general rules of harmony, and to that of pleasing, and the best are those which pleases the most and are best approved by the public.

These are all the particular rules which may belong to the different vocal, instrumental, and local music, as are expressed in the articles of the present last chapter, which puts an end to the whole treatise of the harmonic art, or composition of music.



L'Arte Armonica,
OR
A Treatise on the Composition of
MUSICK,
In Three Books;

With an Introduction, on the HISTORY, and
PROGRESS of MUSICK from its beginning to this Time,

Written in Italian by

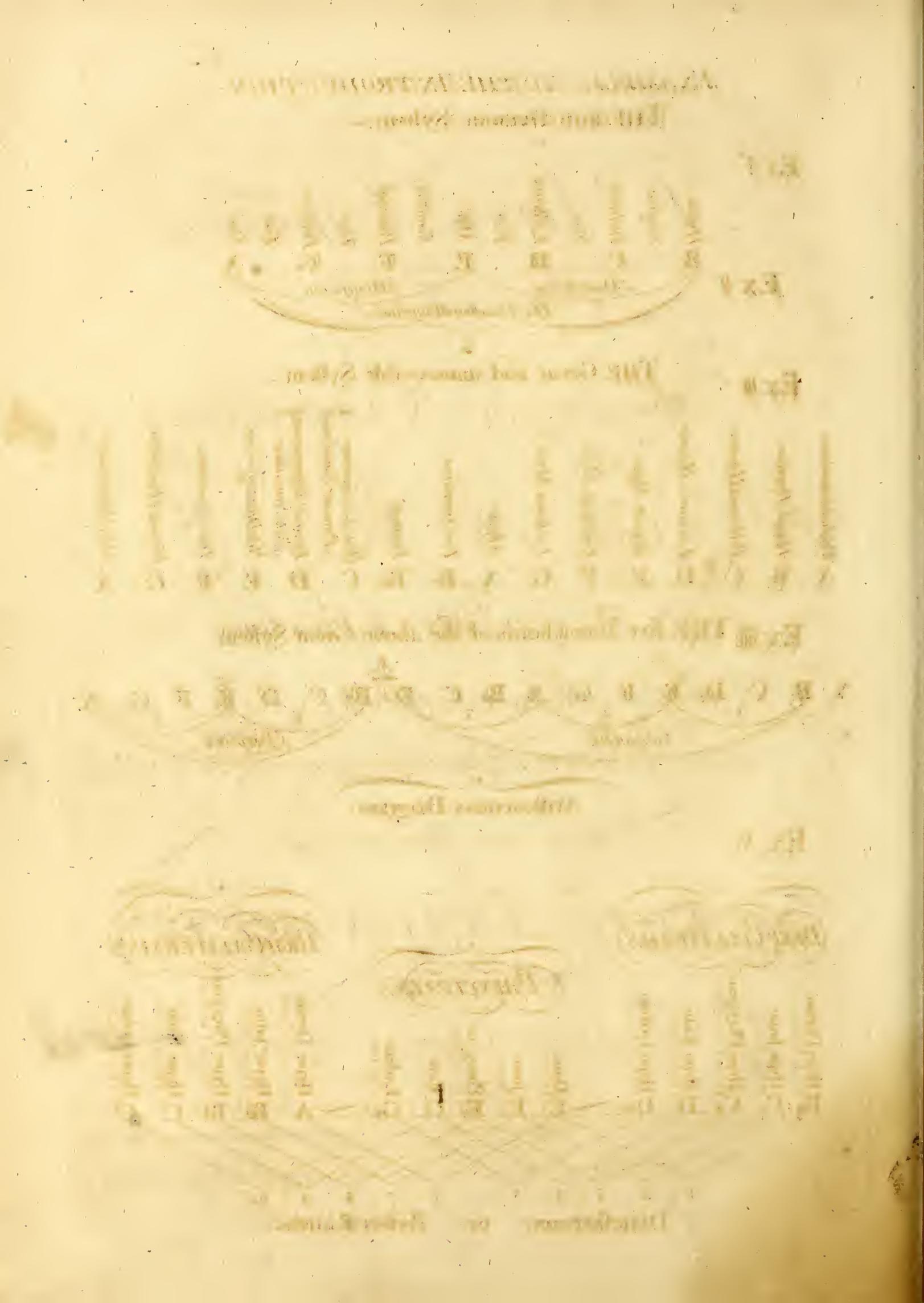
GIORGIO ANTONIOTTO,

A. N. D.

Translated into English?

Vol. II

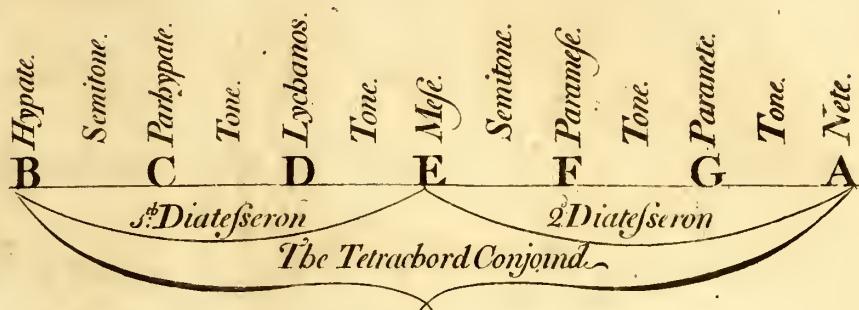
London; Printed by John Johnson in Cheapside.
1760.



EXAMPLES TO THE INTRODUCTION.

THE First Diatonic System.

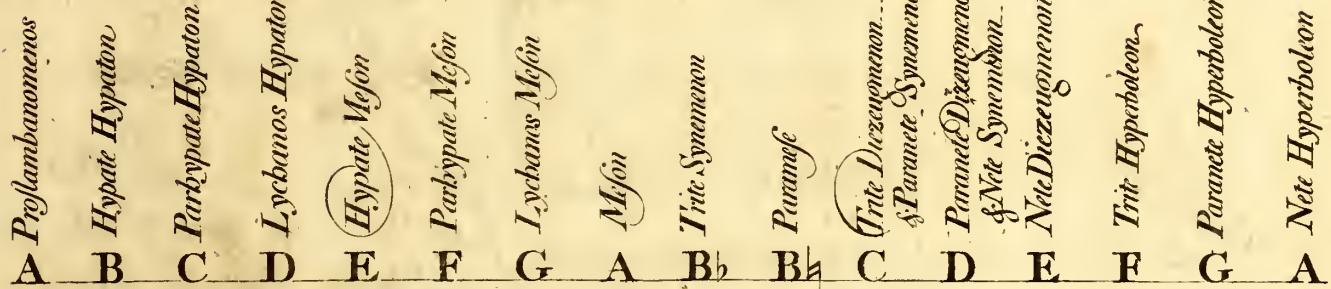
Ex. I.



Ex. II.

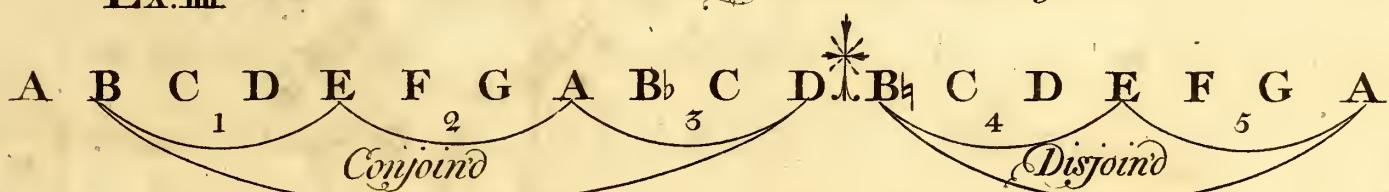
THE Great and immoveable System.

Ex. III.



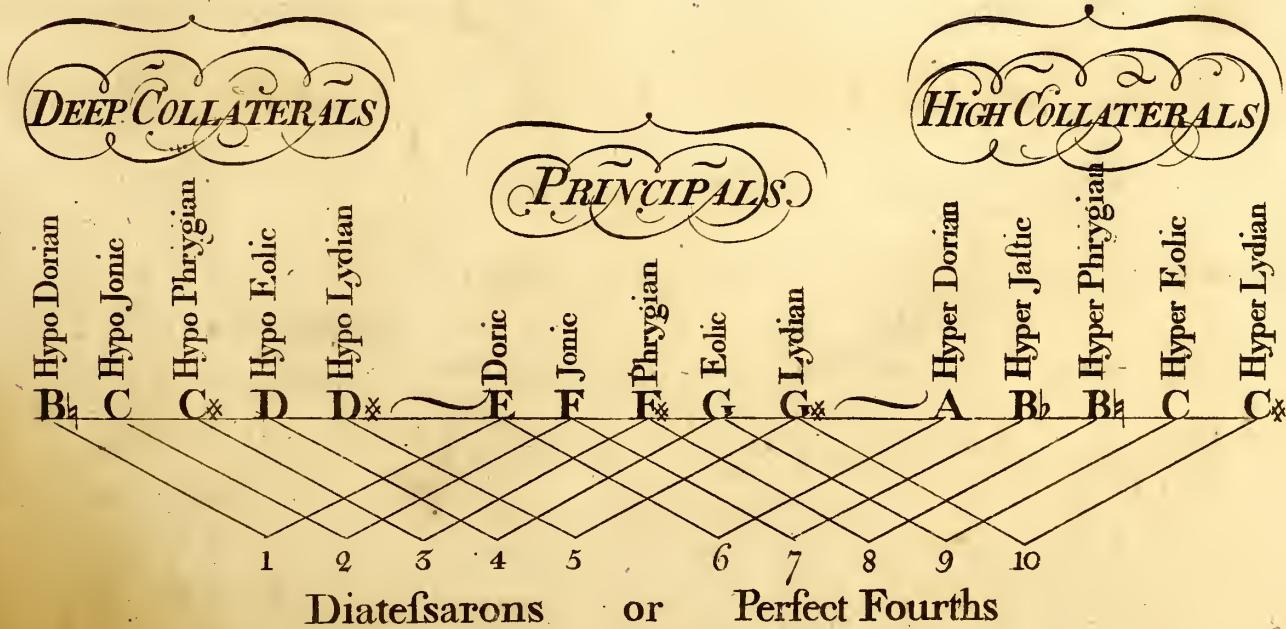
Ex. IV.

THE five Tetrachords of the above Great System



Aristoxenus's Diagram

Ex. V.



Ex. vi.



Gam-ut — — — — —

Proflambanomenos A re — — — — —

Hypate Hypaton B mi — — — — —

Parhypate Hypaton C fa ut — — — 2^d HEX —

Lychanos Hypaton D sol re — — — — —

Hypate Meson E la mi — — — — —

Parhypate Meson F — fa ut — — — 3^d — —Lychanos Meson G — sol re ut — — — 4^d —

Mese a — la mi re — — — —

(Disdiapason or double Octave b^b Inite Synemenon fa — — — — —Paramese b^b — — — — mi — — —Trite Diezeugmenon c Paraneⁿ Syneⁿ sol fa ut — — 5^bParanete Diezeugmenon d Nete Syneⁿ la fol re — —

Nete Diezeugmenon e — — — la mi — —

Trite Hyperbolæon f — — — — fa ut — 6^bParanete Hyperbolæon g — — — — sol re ut 7^b

Nete Hyperbolæon aa — — — — la mi re

1 bb — — — — — — fa —

2 bb^b — — — — — — mi

3 cc — — — — — — fol fa

4 dd — — — — — — la fol

5 ee — — — — — — la

Notes Added
by Guido

4.

Ex. VIII.

Fig. Ith

Ex. IX.

Alla Breve or Common Time
a Capella

Divisions of Common Time

First Fig.

2 | 4 | 6 | 12

Signs of
TIME.

Triple Time

Divisions of Triple Time.

2nd Fig

3 | 4 | 6 | 6

Alla Breve Time a Capella Common Time

The Notes to Each of the Signs of Time

3rd Fig.

Major Triples Minor Triples Smallest Triples

4th Fig.

Smallest Triples Smallest Triples

5th Fig.

Ex. X.

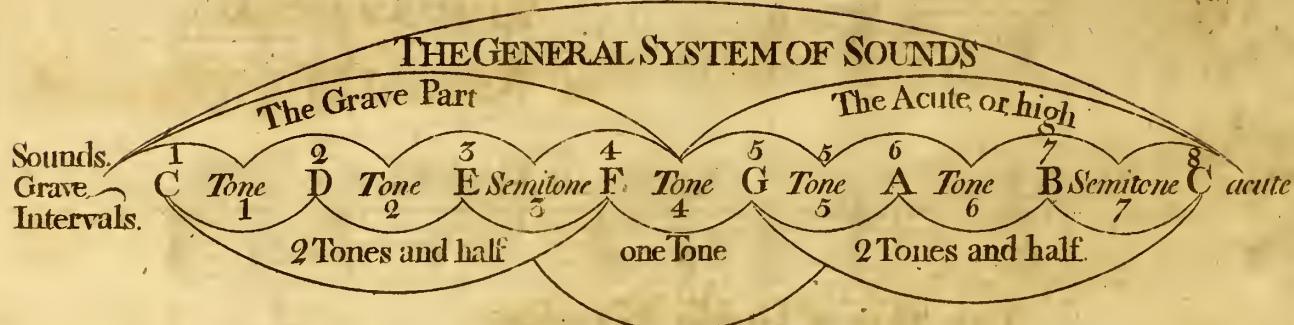
6th Fig.
KEYS.

Division of Measures. Repeats, S. Directs ad Libitum End

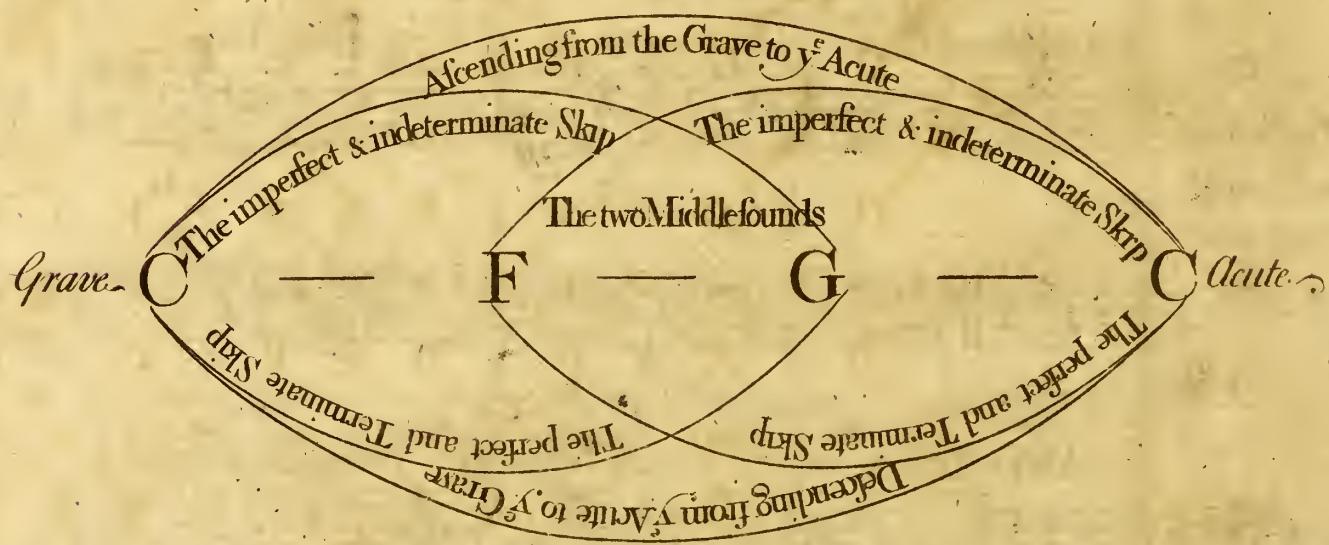
7th Fig.

6. BOOK THE FIRST.

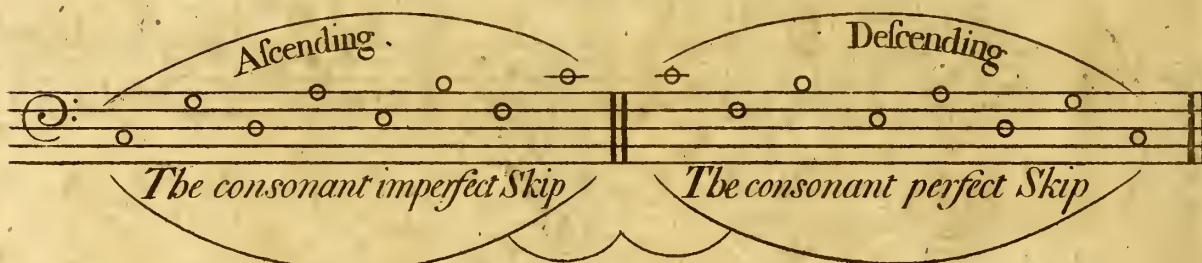
Ex. I



Ex. II



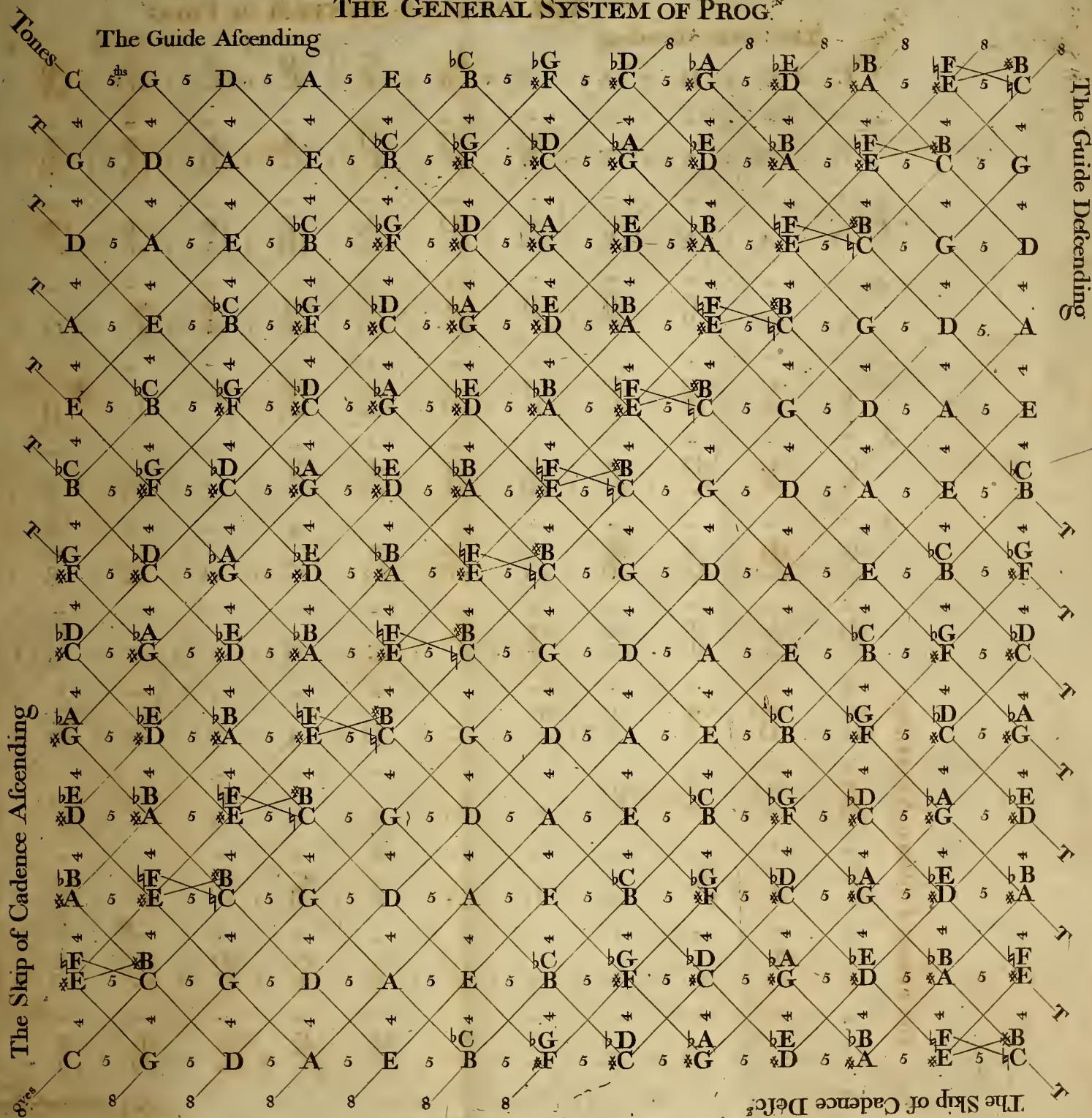
Ex. III



Ex. IV

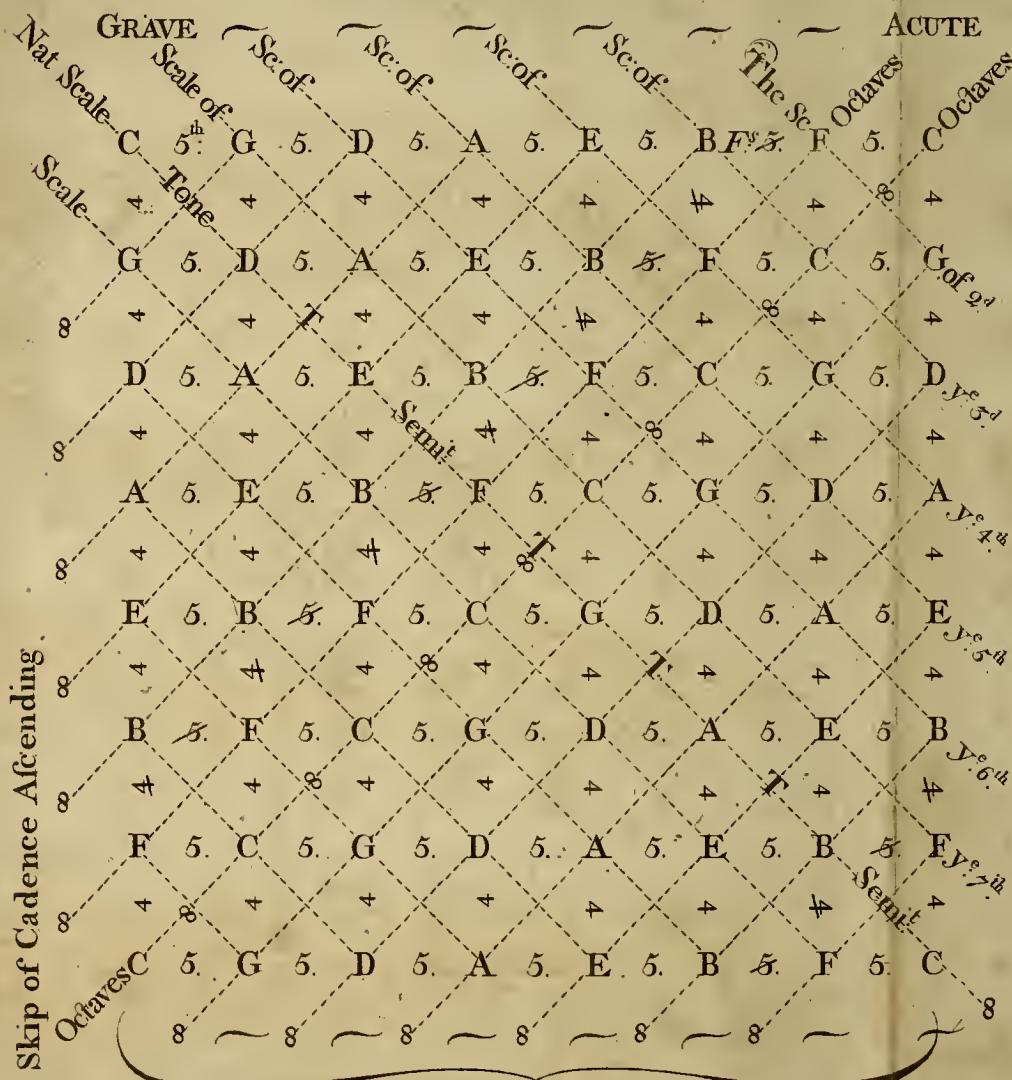


THE GENERAL SYSTEM OF PROG.⁷



THE SYSTEM of Natural Progression.

The Skip of Guide Ascending

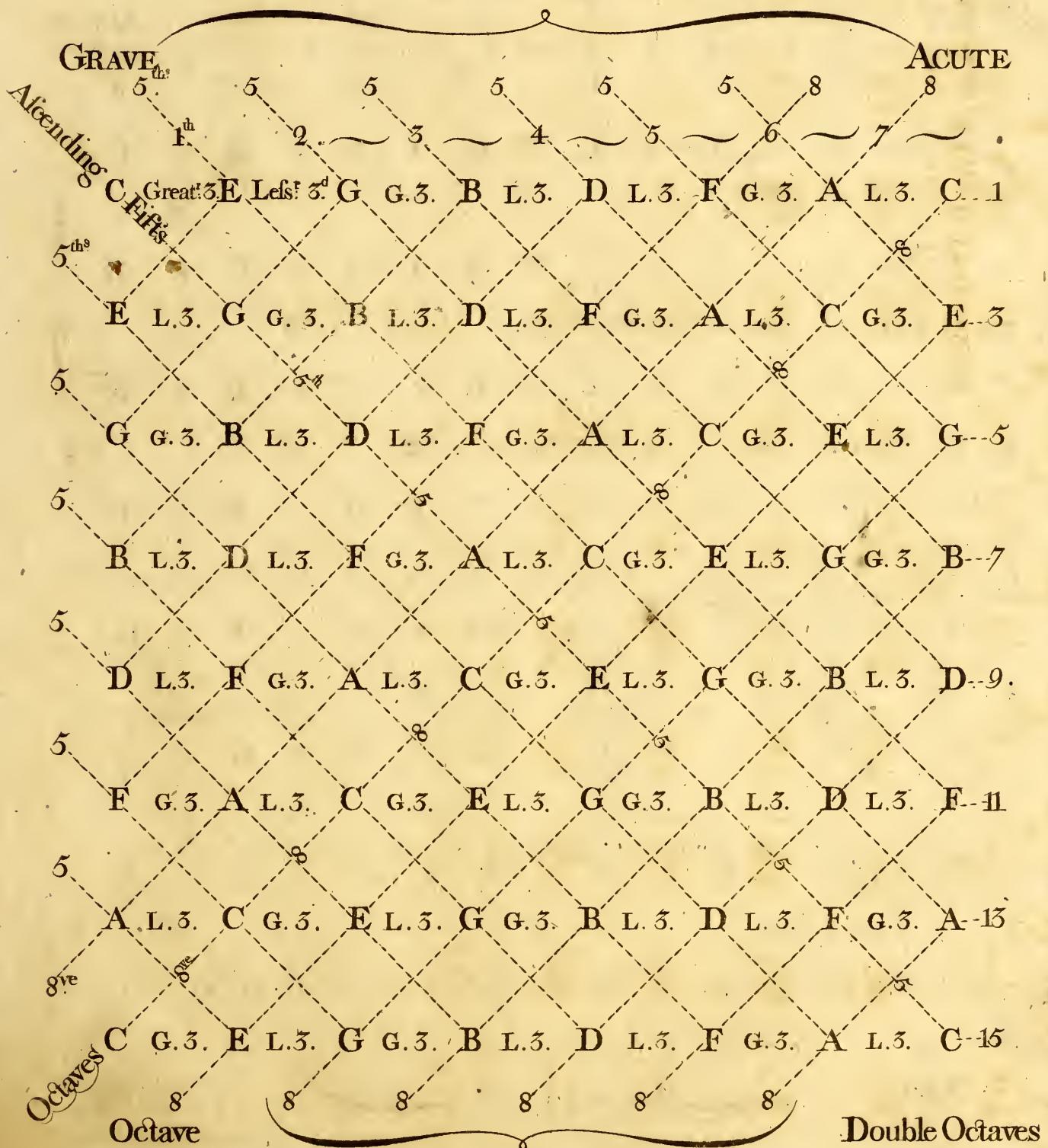


The Skip of Cadence Descending

The Skip of Guide Descending

Ex. vii.

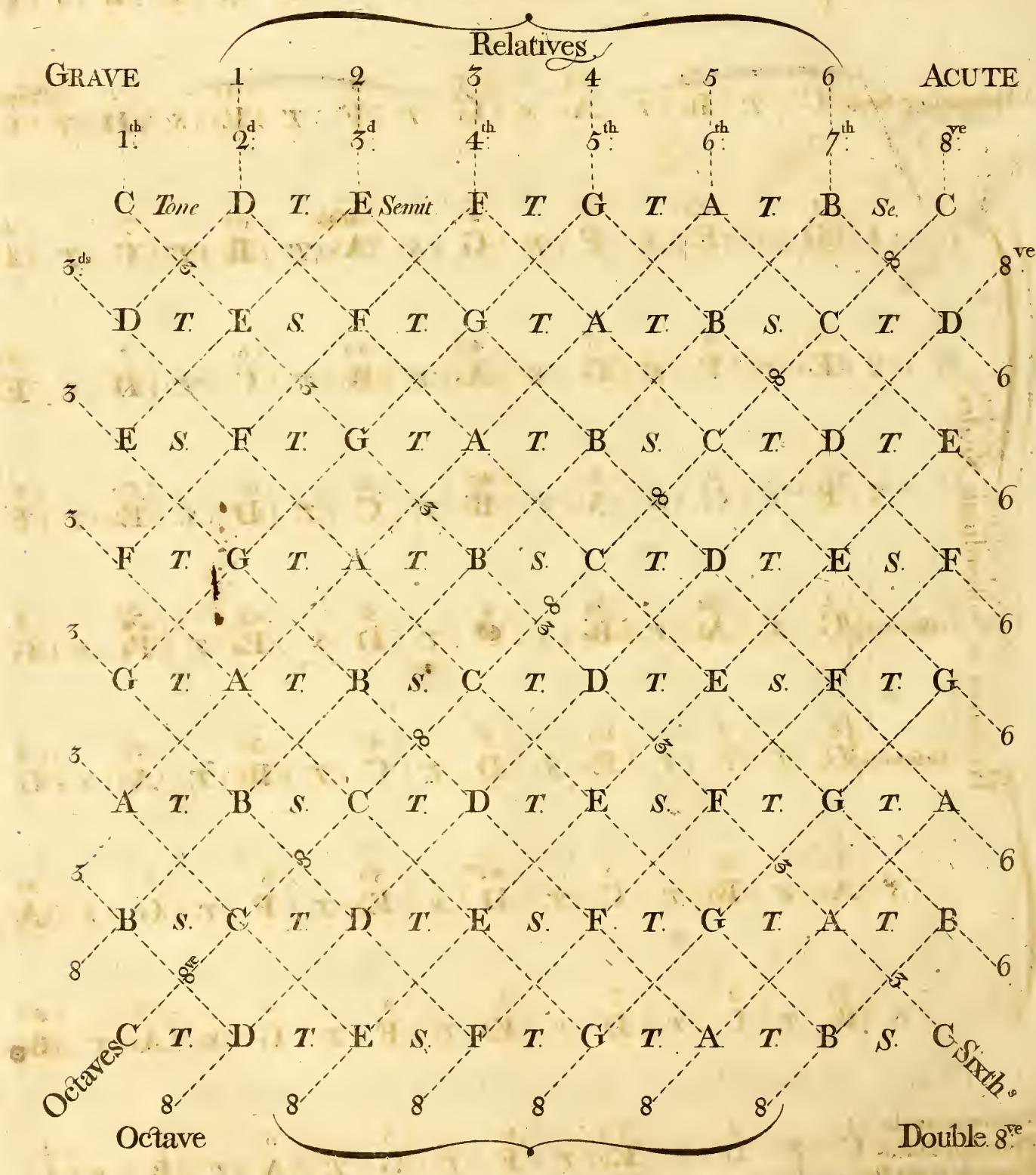
THE SYSTEM of Harmonic Combination *in the Natural Scale*



Ex. VIII.

THE NATURAL SCALE

With Six Relative Scales.



Ex. ix.

THE Principal Artificial Scale and its Relatives

The Fundamental Principal Ascending Scale	C	Tone	D	Semi-Tone	E _b	T.	F	T.	G	T.	A	T.	B	s.	C	
	8		7 _b		6 _b		5		4		3 _b		2	Principal		
Descending Scale	C	T.	B _b	T.	A _b	s.	G	T.	F	T.	E _b	s.	D	T.	C	
	1	D	s.	E _b	T.	F	T.	G	s.	A _b	T.	B _b	T.	C	T.	D
(Relatives or Subordinate Scales)	2	E _b	T.	F	T.	G	s.	A _b	T.	B _b	T.	C	T.	D	s.	E _b
	3	F	T.	G	s.	A _b	T.	B _b	T.	C	T.	D	s.	E _b	T.	F
Ascending	1	G	T.	A _b	T.	B _b	s.	C	T.	D	s.	E _b	T.	F*	s.	G
	4															
Descending	8	G	T.	F	T.	E _b	s.	D	T.	C	T.	B _b	T.	A _b	s.	G
	5	A _b	T.	B _b	T.	C	T.	D	s.	E _b	T.	F	T.	G	s.	A _b
6	1 _b	B _b	T.	C	T.	D	s.	E _b	T.	F	T.	G	s.	A _b	T.	B _b
	2															

The same as the Principal but as C T. D s. E_b T. F T. G T. A T. B s. C
Relative to the Principal

Ex. X.

Ascending

Ex. XI.

Descending

THE two SCALES of Transposition Ascending and Descending

Ex. XII.

Ascending Sc:

Sounds	1	2	3	4	5	6	7	8	9	10	11	12	13
Grave	C	C*	D	D*	E	F	F*	G	G*	A	A*	B	C
Intervals	1	2	3	4	5	6	7	8	9	10	11	12	

Grave to the Acute

Descending Sc:

Sounds	1	2	3	4	5	6	7	8	9	10	11	12	13
Ex. XIII.	C	B	B _b	A	A _b	G	G _b	F	E	E _b	D	D _b	C

Acute to the Grave

Ex. XIV.

The Natural SCALE with its Transpos'd Scales

The first Natural Principal Scale

Scales of Different Denominations

1 C	¹ D	² E	³ F	⁴ G	⁵ A	⁶ B	⁷ C	⁸	1	...
2 C*	¹ D*	² E*	³ F*	⁴ G*	⁵ A*	⁶ B*	⁷ C*	⁸	¹ 2D _b	E _b F
3 D	¹ E	² F*	³ G	⁴ A	⁵ B	⁶ C*	⁷ D	⁸	3	...
4 D*	¹ E*	² F*	³ G*	⁴ A*	⁵ B*	⁶ C*	⁷ D*	⁸	¹ 4E _b	F G A _b B _b C D E _b
5 E	¹ F*	² G*	³ A	⁴ B	⁵ C*	⁶ D*	⁷ E	⁸	5	...
6 F	¹ G	² A	³ B _b	⁴ C	⁵ D	⁶ E	⁷ F	⁸	6	...
7 F*	¹ G*	² A*	³ B	⁴ C*	⁵ D*	⁶ E*	⁷ F*	⁸	¹ 7G _b	A _b B _b C _b D _b E _b F G _b
8 G	¹ A	² B	³ C	⁴ D	⁵ E	⁶ F*	⁷ G	⁸	8	...
9 G*	¹ A*	² B*	³ C*	⁴ D*	⁵ E*	⁶ F*	⁷ G*	⁸	¹ 9A _b	B _b C D _b E _b F G A _b
10 A	¹ B	² C*	³ D*	⁴ E	⁵ F*	⁶ G*	⁷ A	⁸	10	...
11 A*	¹ B*	² C*	³ D*	⁴ E*	⁵ F*	⁶ G*	⁷ A*	⁸	¹ 11B _b	C D E _b F G A B _b
12 B	¹ C*	² D*	³ E	⁴ F*	⁵ G*	⁶ A*	⁷ B	⁸	12	...
13 C	¹ D	² E	³ F	⁴ G	⁵ A	⁶ B	⁷ C	⁸	13	...

The Octave of the first Natural Scale

THE ARTIFICIAL SCALE
with its Transpos'd Scales Ascending

								SCALES of Different Denominations							
1 C	2 D	3 E _b	4 F	5 G	6 A	7 B	8 C~1....								
2 C*	2 D*	E	F*	G*	A*	B*	C*~2....	D _b	E _b	F _b	G _b	A _b	B _b	C	D _b
3 D	2 E	F	G	A	B	C*	D~3....								
4 D*	E*	F*	G*	A*	B*	C*	D*~4....	E _b	F	G _b	A _b	B _b	C	D	E _b
5 E	F*	G	A	B	C*	D*	E~5....								
6 F	G	A _b	B _b	C	D	E	F~6....								
7 F*	G*	A	B	C*	D*	E*	F*~7....	G _b	A _b	B _b	C _b	D _b	E _b	F	G _b
8 G	A	B _b	C	D	E	F*	G~8....								
9 G*	A*	B	C*	D*	E*	F*	G*~9....	A _b	B _b	C _b	D _b	E _b	F	G	A _b
10 A	B	C	D	E	F*	G*	A~10....								
11 A*	B*	C*	D*	E*	F*	G*	A*~11....	B _b	C	D _b	E _b	F	G	A	B _b
12 B	C*	D	E	F*	G*	A*	B~12....								
13 C	D	E	F	G	A	B	C~13....								

The 8th of the First Artificial Scale

Ex. XVI. The same Artificial Scale with its Transpos'd
Scales Descending

	ACUTE							GRAVE							ACUTE							GRAVE						
1	C	B _b	A _b	G	F	E _b	D	C	1																			
2	C*	B	A	G*	F*	E	D*	C*~2	D _b	C _b	B _{bb}	A _b	G _b	F _b	E _b	D _b	1											
3	D	C	B _b	A	G	F	E	D~3																				
4	D*	C*	B _b	A*	G*	F*	E*	D*~4	E _b	D _b	C _b	B _b	A _b	G _b	F	E _b	1	2										
5	E	D	C	B	A	G	F*	E~5																				
6	F	E _b	D _b	C	B _b	A _b	G	F~6																				
7	F*	E	D	C*	B	A	G*	F*~7	G _b	F _b	E _{bb}	D _b	C _b	B _{bb}	A _b	G _b	1	3										
8	G	F	E _b	D	C	B _b	A	G~8																				
9	G*	F*	E	D*	C*	B	A*	G*~9	A _b	G _b	F _b	E _b	D _b	C _b	B _b	A _b	1	4										
10	A	G	F	E	D	C	B	A~10																				
11	A*	G*	F*	E*	D*	C*	B*	A*~11	B _b	A _b	G _b	F	E _b	D _b	C	B _b	1	5										
12	B	A	G	F*	E	D	C*	B~12																				
13	C	B _b	A _b	G	F	E _b	D _b	C~13																				

The 8th of the First

Scales of Parts in Concert. Ex XVII.

^DF

F

A

C

A

C

E

G

C

G

E

C &c.

E &c

B &c

Ex XVIII.

Unisons

c c c c c c c c

BOOK THE SECOND

THE HARMONIC CODE

Part the first

Chap^r the First of the Skip of Cadence

Art: First

Can: 1st

Art: 2^d

Can: 2^d

Can: 3^d

18.

Art: 3.^d

Can:8.

Handwritten musical score for Canon 8, consisting of four staves of music. The staves are in common time and use a treble clef. Below each note head is a numerical value representing its pitch or duration. The values range from 3 to 9. The music is divided into measures by vertical bar lines.

Can:9.

Handwritten musical score for Canon 9, consisting of four staves of music. The staves are in common time and use a treble clef. Below each note head is a numerical value representing its pitch or duration. The values range from 3 to 9. The music is divided into measures by vertical bar lines.

20.

Art: 4th

Art: 4th

Can: 10th

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Art. 5th

Can. 11th

Can. 12th

Art. 6th

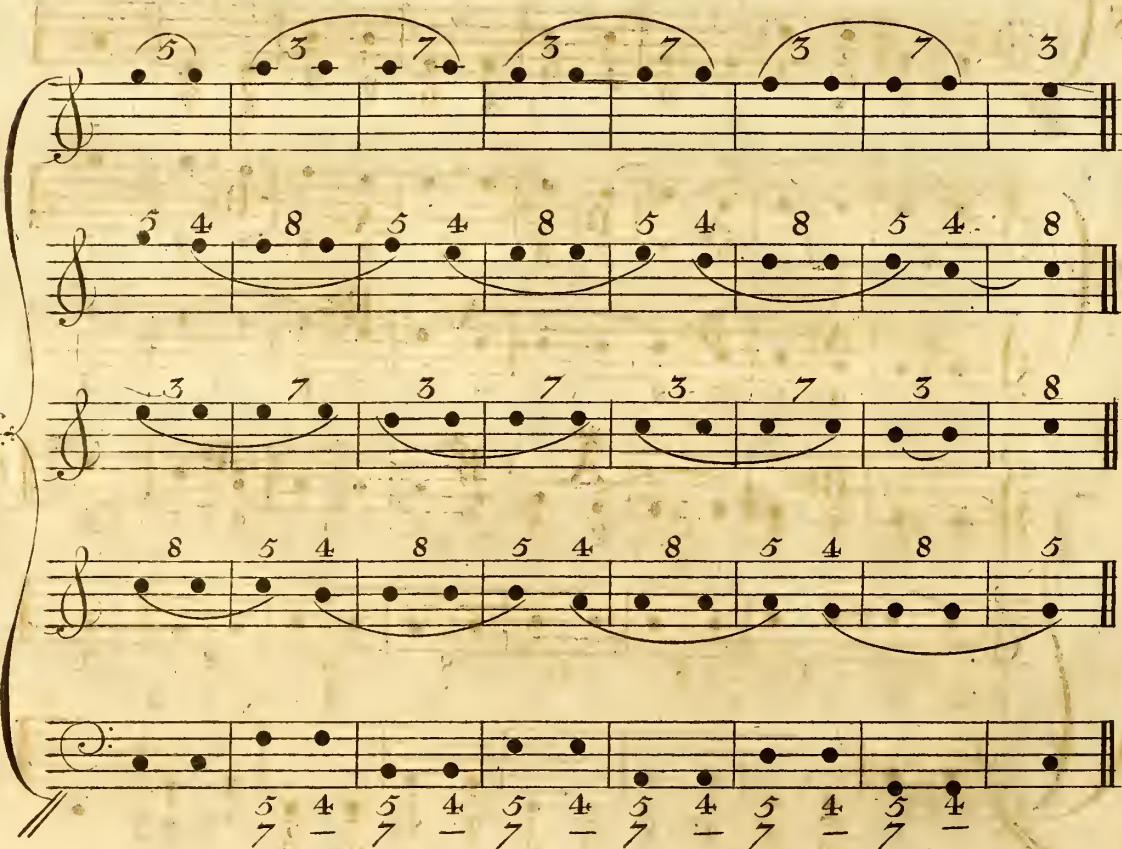
Can. 13th

Can. 14th

Can:15.



Can:16.



Can.17.

Art. 7.th

Can.18.

Two
Choruses

24.

Chap. 2.^d

Art First.

Can: 19

Art. 2.^d

Can: 20

Can: 21

Art. 3.^d

Can: 22

Can: 23.

Art: 4th

Can: 24.

Can: 25.

Chap. 3.^a

26.

Art. 1st

Can. 26

Art. 2.^a

Can. 27

Can. 28

Can. 28

Can. 29

Chap. 4th

Art. 1st

Can: 31.

A handwritten musical score for two voices. The top staff uses a soprano C-clef and the bottom staff uses an alto F-clef. Both staves have a common time signature. The music consists of two measures. The first measure contains 12 numbered notes: 5, 7, 3, 5, 8, 3, 7, 8, 5, 7, 3, 5. The second measure contains 12 numbered notes: 8, 3, 5, 8, 3, 7, 8, 5, 7, 3, 5, 8. The notes are connected by horizontal lines indicating pitch and rhythm.

Musical score for Canon 32, featuring two staves. The top staff is in common time and consists of two measures. The first measure starts with a bass note (G) followed by a treble note (A). The second measure starts with a bass note (D) followed by a treble note (E). The bottom staff is also in common time and consists of two measures. The first measure starts with a bass note (B) followed by a treble note (C). The second measure starts with a bass note (F) followed by a treble note (G).

28.

A handwritten musical score for three voices. The top voice uses a soprano C-clef, the middle voice an alto F-clef, and the bottom voice a bass G-clef. The music consists of two systems of measures. Measure 1 starts with a forte dynamic. Measure 2 starts with a piano dynamic. Measures 3-4 start with a forte dynamic. Measures 5-6 start with a piano dynamic. Measures 7-8 start with a forte dynamic. Measures 9-10 start with a piano dynamic. Measures 11-12 start with a forte dynamic. Measures 13-14 start with a piano dynamic. Measures 15-16 start with a forte dynamic. Measures 17-18 start with a piano dynamic. Measures 19-20 start with a forte dynamic. Measures 21-22 start with a piano dynamic. Measures 23-24 start with a forte dynamic. Measures 25-26 start with a piano dynamic. Measures 27-28 start with a forte dynamic. Measures 29-30 start with a piano dynamic. Measures 31-32 start with a forte dynamic. Measures 33-34 start with a piano dynamic. Measures 35-36 start with a forte dynamic. Measures 37-38 start with a piano dynamic. Measures 39-40 start with a forte dynamic. Measures 41-42 start with a piano dynamic. Measures 43-44 start with a forte dynamic. Measures 45-46 start with a piano dynamic. Measures 47-48 start with a forte dynamic. Measures 49-50 start with a piano dynamic. Measures 51-52 start with a forte dynamic. Measures 53-54 start with a piano dynamic. Measures 55-56 start with a forte dynamic. Measures 57-58 start with a piano dynamic. Measures 59-60 start with a forte dynamic. Measures 61-62 start with a piano dynamic. Measures 63-64 start with a forte dynamic. Measures 65-66 start with a piano dynamic. Measures 67-68 start with a forte dynamic. Measures 69-70 start with a piano dynamic. Measures 71-72 start with a forte dynamic. Measures 73-74 start with a piano dynamic. Measures 75-76 start with a forte dynamic. Measures 77-78 start with a piano dynamic. Measures 79-80 start with a forte dynamic. Measures 81-82 start with a piano dynamic. Measures 83-84 start with a forte dynamic. Measures 85-86 start with a piano dynamic. Measures 87-88 start with a forte dynamic. Measures 89-90 start with a piano dynamic. Measures 91-92 start with a forte dynamic. Measures 93-94 start with a piano dynamic. Measures 95-96 start with a forte dynamic. Measures 97-98 start with a piano dynamic. Measures 99-100 start with a forte dynamic.

Can 34

Handwritten musical score for Can 34, featuring six staves of music with various note heads and rests. The score includes a bass clef, a key signature of one sharp, and a common time signature. Measures 1 through 10 are shown, ending with a repeat sign and a double bar line.

Chap. 5.th

Can. 35

Can. 36.

Chap. 6.th

Can. 37

Can. 38

Chap. 7.th

Can. 39

30.

Handwritten musical score for Canon 40. The score consists of five staves of music. The first four staves are in common time and have a treble clef. The fifth staff begins with a common time signature and a treble clef, but changes to a G-clef (soprano) at the end. The music is composed of numbered note heads (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9) connected by horizontal lines. Measures are separated by vertical bar lines. The notes are primarily on the middle line of the staff. The score is enclosed in a large brace on the left side.

Can. 41

Handwritten musical score for Canon 41. The score consists of two staves. The top staff uses a common time signature and a treble clef. The bottom staff uses a common time signature and a bass clef. The music is composed of numbered note heads (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9) connected by horizontal lines. Measures are separated by vertical bar lines. The notes are primarily on the middle line of the staff. The score is enclosed in a large brace on the left side.

Chap. 8.th

Can. 42

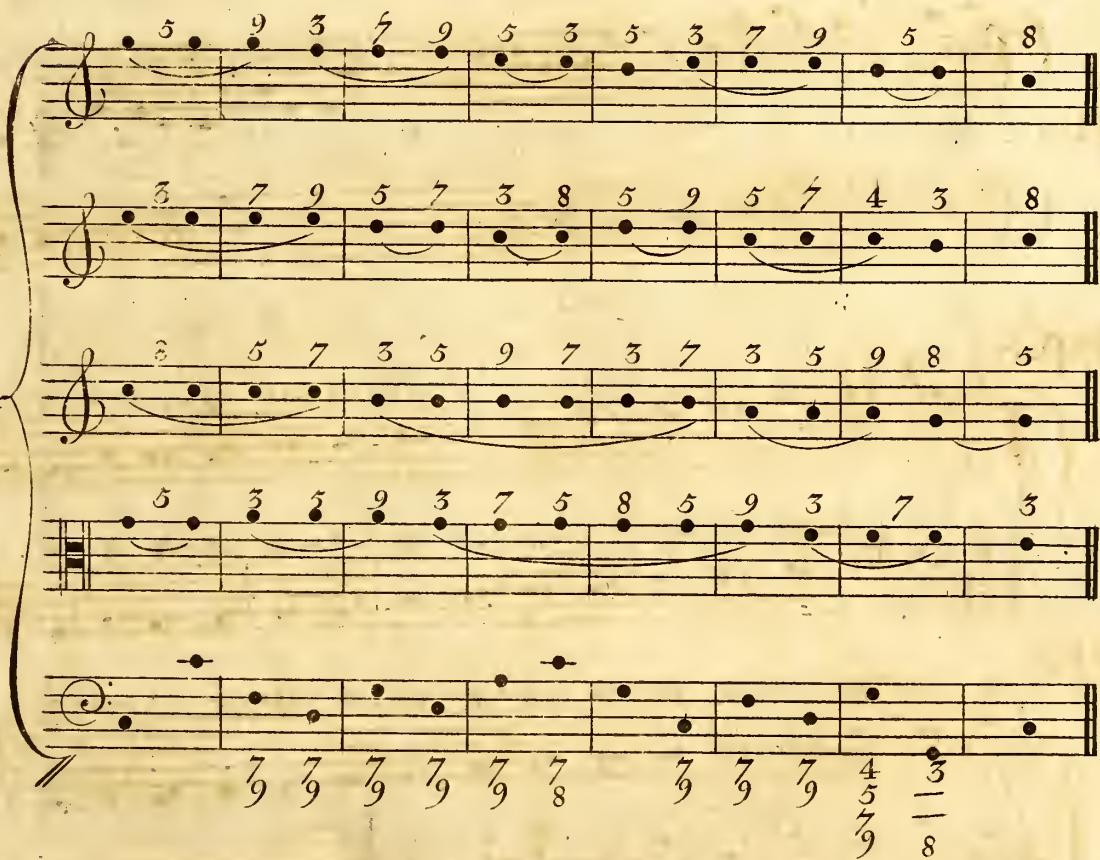
Handwritten musical score for Canon 42. The score consists of four staves. The first three staves are in common time and have a treble clef. The fourth staff begins with a common time signature and a treble clef, but changes to a G-clef (soprano) at the end. The music is composed of numbered note heads (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9) connected by horizontal lines. Measures are separated by vertical bar lines. The notes are primarily on the middle line of the staff. The score is enclosed in a large brace on the left side.

Chap. 9.^b

Can. 43



Can. 44



32.

Can. 45.

A handwritten musical score for a six-string instrument, likely guitar or banjo. The score is organized into seven staves:

- Staff 1:** Treble clef, 5, 9, 4, 8, 8, 5.
- Staff 2:** Treble clef, 3, 7, 9, 6, 5, 3.
- Staff 3:** Treble clef, 8, 5, 7, 4, 3, 8.
- Staff 4:** Treble clef, 5, 3, 5, 9, 3, 8.
- Staff 5:** Treble clef, 5, 8, 3, 7, 8, 5.
- Staff 6:** Treble clef, 3, 7, 8, 5, 5, 8.
- Staff 7:** Treble clef, 8, 5, 7, 3, 3, 8.

Below the staff 7 is a tablature section with a treble clef. It shows a sequence of notes with fingerings: 3, 5, 7, 8, 9; 3, 4, 5, 7, 8, 9; and a complex sequence of 5, 4, 5, 6, 5, 7, 8, 9. To the right of the tablature are several sets of numbers: 3, 4, 5, 6, 5, 7, 8, 9; 3, 4, 5, 6, 5, 7, 8, 9; and 3, 5, 6, 5, 7, 8, 9, 10, 12, 15.

THE HARMONIC CODE

Part the Second

Chap. y First.

Art. 1st

Musical notation for Art. 1st and Can. 46. The notation consists of two staves. The top staff is in common time and has a treble clef. The bottom staff is in common time and has a bass clef. Both staves use a staff system where each staff has four lines and four spaces. The notes are represented by dots and dashes, with some having stems and others being stems themselves. There are also some horizontal strokes above the notes. The music is divided into measures by vertical bar lines.

Art. 2^d

Musical notation for Art. 2^d and Can. 47. Similar to the previous set, it features two staves. The top staff is in common time with a treble clef, and the bottom staff is in common time with a bass clef. The notation uses a staff system with four lines and four spaces. Notes are indicated by dots and dashes, with stems and horizontal strokes. Measures are separated by vertical bar lines.

Art. 3^d

Musical notation for Art. 3^d and Can. 48. This section continues the pattern of two staves per measure. The top staff is in common time with a treble clef, and the bottom staff is in common time with a bass clef. The notation uses a staff system with four lines and four spaces. Notes are represented by dots and dashes, with stems and horizontal strokes. Measures are separated by vertical bar lines.

34.

Can: 49

5 3 7 3 7 3 7 3 7 3 8
5 9 5 9 5 9 5 9 5 9 5 9 5
3 7 3 7 3 7 3 7 3 7 3 7 3.
8 5 9 5 9 5 9 5 9 5 9 5 8
3 3 3 3 3 3 3 3 3 3 3 3 3.

Art. 4.

5 3 8 5 3 8 5 3 8 5 3 8 5
3 8 5 3 8 5 3 8 5 3 8 5 3

Can: 50

8 5 3 8 5 3 8 5 3 8 5 3 8
3 3 3 3 3 3 3 3 3 3 3 3

Art. 5. & 6.

5 8 5 8 5 8 5 8 5 8 5 8 5
3 7 3 7 3 7 3 7 3 7 3 7 3
8 5 8 5 8 5 8 5 8 5 8 5 8
5 3 7 3 7 3 7 3 7 3 7 3 8
7 7 7 7 7 7 7 7 7 7 7 7

Can: 51

Can:52

A handwritten musical score for Canon 52, consisting of five staves of music. The music is written in common time, with a key signature of one flat. The notes are represented by various symbols, including dots, crosses, and asterisks, often connected by horizontal lines. The first staff begins with a note pair (5-9) followed by a series of single notes. The second staff starts with a note pair (3-7). The third staff begins with a note pair (8-5). The fourth staff begins with a note pair (5-3). The fifth staff begins with a note pair (3-7).

Can.53

A handwritten musical score for Canon 53, consisting of five staves of music. The music is written in common time, with a key signature of one flat. The notes are represented by various symbols, including dots, crosses, and asterisks, often connected by horizontal lines. The first staff begins with a note pair (5-8). The second staff begins with a note pair (8-5). The third staff begins with a note pair (3-9). The fourth staff begins with a note pair (5-3). The fifth staff begins with a note pair (3-9).

36.

Can:54

Art.1st

Handwritten musical score for Can:54, Art. 1st. The score consists of four staves, each with a different clef (G, F, G, C) and a common time signature. The music uses a unique notation system where note heads are represented by numbers (e.g., 8, 5, 3, 7, 8) and stems are either vertical lines or horizontal dashes. The notes are connected by various types of beams and ties. The first staff starts with a 5, followed by a 9, a 3, a 7, an 8, and a 5. The second staff starts with a 5, followed by a 9, a 3, a 7, an 8, and a 5. The third staff starts with a 3, followed by a 7, an 8, and a 5. The fourth staff starts with a 5, followed by a 9, a 3, a 7, an 8, and a 5. The music continues with similar patterns across the staves.

Chap. 2.

Can:55

Handwritten musical score for Can:55, Chap. 2. The score consists of four staves, each with a different clef (G, F, G, C) and a common time signature. The notation is identical to Can:54, Art. 1st, using numbers (e.g., 8, 5, 3, 7, 8) and stems (vertical lines or horizontal dashes) to represent notes. The first staff starts with a 5, followed by an 8, a 3, a 5, an 8, and a 3. The second staff starts with a 5, followed by an 8, a 3, a 5, an 8, and a 3. The third staff starts with a 3, followed by an 8, and a 5. The fourth staff starts with a 5, followed by an 8, a 3, and a 5. The music follows a repeating pattern of these four staves.

Can:56

Handwritten musical score for Can:56. The score consists of four staves, each with a different clef (G, F, G, C) and a common time signature. The notation is identical to Can:54, Art. 1st, using numbers (e.g., 8, 5, 3, 7, 8) and stems (vertical lines or horizontal dashes) to represent notes. The first staff starts with a 5, followed by an 8, a 3, a 5, an 8, and a 3. The second staff starts with a 5, followed by an 8, a 3, a 5, an 8, and a 3. The third staff starts with a 3, followed by an 8, and a 5. The fourth staff starts with a 5, followed by an 8, a 3, and a 5. The music follows a repeating pattern of these four staves.

Chap. 3.^d

CAN. 57

Handwritten musical score for Canon 57, Chapter 3. The score consists of five staves of music for a single instrument. The music is written in common time with a bass clef. The notes are represented by dots with numerical subscripts indicating pitch, such as 8, 3, 5, etc. The score includes a brace grouping the first three staves and a repeat sign with a 'b' below it.

CAN. 58

Handwritten musical score for Canon 58. The score consists of five staves of music for a single instrument, continuing from Canon 57. The music is written in common time with a bass clef. The notes are represented by dots with numerical subscripts indicating pitch. The score includes a brace grouping the first three staves and a repeat sign with a 'b' below it.

CAN. 59.

Handwritten musical score for Canon 59, consisting of six staves of music. The music is written in common time, with various note heads and stems. The notes are represented by dots and crosses, with stems extending either up or down. The score is divided into measures by vertical bar lines.

CAN. 60.

Handwritten musical score for Canon 60, consisting of six staves of music. The music is written in common time, with various note heads and stems. The notes are represented by dots and crosses, with stems extending either up or down. The score is divided into measures by vertical bar lines.

Chap. 4.th

CAN:61.

Art. 1.

Musical score for three voices (Soprano, Alto, Bass) showing measures 8-15. The Soprano part consists of eighth-note patterns like 8-3-8-3-8-3. The Alto part has eighth-note pairs like 5-8-5-8-5-8-5. The Bass part has eighth-note pairs like 3-5-3-5-3-5-3. Measures 13-15 show melodic lines with eighth-note pairs and sixteenth-note patterns.

CAN.62

CAN. 63.

CAN. 64

Handwritten musical score for Canon 64, consisting of four staves. The staves are connected by a brace on the left. The music uses a variety of note heads, including solid dots, crosses, and asterisks, with rests and stems.

CAN. 65

Handwritten musical score for Canon 65, consisting of four staves. The staves are connected by a brace on the left. The music uses a variety of note heads, including solid dots, crosses, and asterisks, with rests and stems.

Art. 2.^d

CAN. 66

Handwritten musical score for Canon 66, consisting of four staves. The staves are connected by a brace on the left. The music uses a variety of note heads, including solid dots, crosses, and asterisks, with rests and stems.

CAN:67

Handwritten musical score for Canon 67, consisting of five staves of music. The notation uses a combination of note heads (solid black dots) and rests (white circles). The staves are connected by a large brace on the left side. The music includes various note values and rests, with some notes having horizontal stems and others being solid dots. The bottom staff ends with a bass clef and a common time signature.

CAN:68

Handwritten musical score for Canon 68, consisting of six staves of music. The notation uses a combination of note heads (solid black dots) and rests (white circles). The staves are connected by a large brace on the left side. The music includes various note values and rests, with some notes having horizontal stems and others being solid dots. The bottom staff ends with a bass clef and a common time signature.

42.

Art. 2.^d

CAN:69

Chap 5th

Art 1st

CAN:70

CAN. 71

Art. 2^d

5 7 3 5 8 3 5 7 3 5 5 8 3 5 7 3 5 8 3
 3 5 8 3 5 7 3 5 5 8 3 5 7 3 5 8 3 5 7
 8 3 5 7 3 5 5 8 3 5 7 3 5 5 8 3 5 7 3 5
 b
 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

5 7 3 5 8 3 5 7 3 5 5 8 3 5 7 3 5 8 3 5 8 3
 3 5 8 3 5 7 3 5 5 8 3 5 7 3 5 5 8 3 5 7
 8 3 5 7 3 5 5 8 3 5 7 3 5 8 3 5 7 3 5 7 3 5
 *
 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

5 7 3 5 8 3 5 7 3 5 5 8 3 5
 3 5 8 3 5 7 3 5 5 8 3 5 7 3 5
 8 3 5 7 3 5 5 8 3 5 7 3 5 8
 *
 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

Chap. 6.^bArt. 1.st

CAN. 72.

Art. 2.^d

CAN. 73.

CAN. 74.

CAN:75

CAN:76

Chap. 7.th

CAN:77

46.

САН: 78

Handwritten musical score for CAN: 78, page 46. The score is for three voices (Soprano, Alto, Bass) and consists of four staves. The top staff uses a soprano C-clef, the second staff an alto F-clef, and the bottom two staves a bass G-clef. The music is in common time. The notation uses dots and numbers (3, 5, 8) to represent pitch and rhythm. Measures 1-8 are shown.

CAN: 79

Handwritten musical score for CAN: 79, page 46. The score is for three voices (Soprano, Alto, Bass) and consists of four staves. The top staff uses a soprano C-clef, the second staff an alto F-clef, and the bottom two staves a bass G-clef. The music is in common time. The notation uses dots and numbers (3, 5, 8) to represent pitch and rhythm. Measures 1-8 are shown.

Chap. 8.

CAN: 80

Handwritten musical score for CAN: 80, page 8. The score is for three voices (Soprano, Alto, Bass) and consists of four staves. The top staff uses a soprano C-clef, the second staff an alto F-clef, and the bottom two staves a bass G-clef. The music is in common time. The notation uses dots and numbers (3, 5, 7, 8, 9) to represent pitch and rhythm. Measures 1-8 are shown.

BOOK THE THIRD

Chap. First

Art. 1st

Ex I

5 0 12	•	12 0 8
5 0 10	10 0 8	10 0 6
8 0 8	8 0 6	8 0 4
0 5	5 0 3	5 0
0 3	3 0	•
0	•	•

Ex II

• 15	8 •	8 •	8 •	8 0 8
• 14	5 •	5 0 8	5 0 6	5 0 4
• 12	3 0 8	3 0 6	3 0 4	3 0 2
• 10	8 0 9	8 0 4	8 0 2	8 0 0
• 8	7 0 3	7 0 3	7 0	7 0
• 6	5 0 3	5 0	5 •	5 •
• 4	3 0	3 •	3 •	3 •
0	•	•	•	•

Ex III

15 •	8 •	8 •	8 •	8 0 7
14 •	5 •	5 0 8	5 0 6	5 0 4
12 •	3 0 8	3 0 6	3 0 4	3 0 2
10 •	9 0 9	9 0 5	9 0 3	9 0 1
8 •	7 0 5	7 0 3	7 0	7 0
6 •	5 0 3	5 0	5 •	5 •
4 •	3 0	3 •	3 •	3 •
0	•	•	•	•

Ex IV

• 15	15 •	•	15 0 8	15 0 7
• 14	14 •	12 •	12 0 8	12 0 6
• 12	12 •	10 •	10 0 6	12 0 4
• 10	10 •	9 0 7	9 0 5	10 0 2
8 •	9 0 6	9 0 4	9 0 2	7 •
6 •	7 0 5	7 0 3	5 •	5 •
4 •	5 0 3	5 0	3 •	3 •
2 •	3 0	3 •	3 •	3 •
0	•	•	•	•

Ex V

15 0	15 0	0 11	0 9	0 7
15 0	0 11	0 9	0 7	0 5
11 0	0 9	0 7	0 5	0 3
9 0	0 7	0 5	0 3	9 0
7 0	0 5	0 5	7 0	•
5 0	3 0	3 0	3 0	3 0
3 0	•	•	•	•

Art. 2.^d & 3.^d

Ex. vi

A handwritten musical score for a string quartet, consisting of four staves. The top staff is for the first violin (G clef), the second for the second violin (C clef), the third for the viola (F clef), and the bottom for the cello (C clef). The score includes measure numbers 1 through 8, dynamic markings like 'p' (piano), 'f' (forte), and 'mf' (mezzo-forte), and various articulation marks such as dots and dashes. The music features a mix of eighth and sixteenth note patterns, often grouped by vertical bar lines. The manuscript is written on aged, yellowed paper.

Ex. VII.

Handwritten musical score for Ex. VII. The score consists of five staves. The top staff is in treble clef. The other four staves are in bass clef and are grouped by a brace. The music includes eighth and sixteenth note patterns with rests. Measure 1: Treble: G, G, G, G. Bass 1: C, E, G, B. Bass 2: C, E, G, B. Bass 3: C, E, G, B. Bass 4: C, E, G, B. Measure 2: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 3: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 4: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 5: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D.

Ex. VIII.

Handwritten musical score for Ex. VIII. The score consists of five staves. The top staff is in treble clef. The other four staves are in bass clef and are grouped by a brace. The music includes eighth and sixteenth note patterns with rests. Measure 1: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 2: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 3: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 4: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D. Measure 5: Treble: G, G, G, G. Bass 1: E, G, B, D. Bass 2: E, G, B, D. Bass 3: E, G, B, D. Bass 4: E, G, B, D.

50.

Ex. IX.

Art. 4th

1

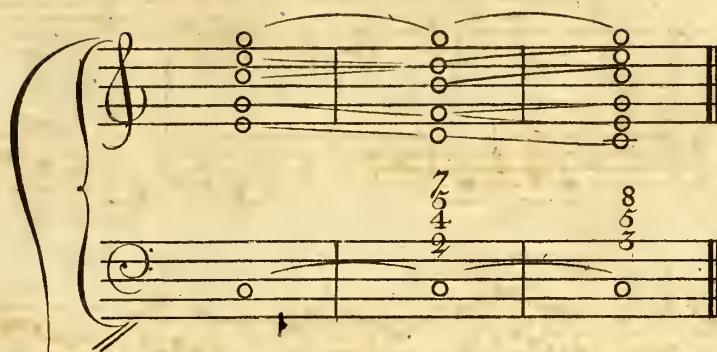
2

3

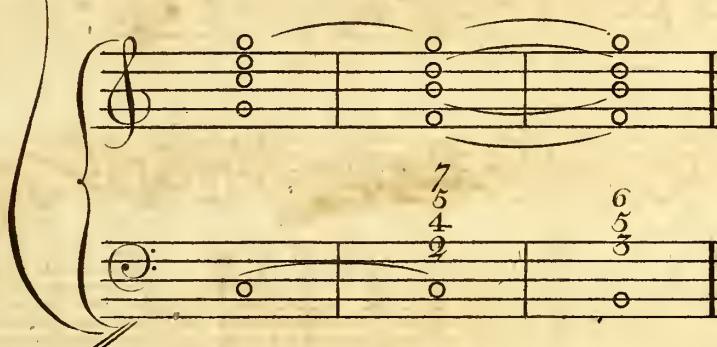
4

13

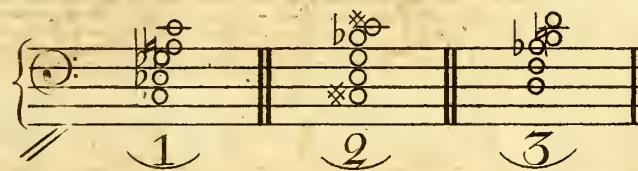
Ex:x

Art. 5.th

Ex:xi.



Ex:xii

Art. 6.th

Ex:xiii.



52.

Ex. XIV.

Art. 7.^b

Ex. XV.

Art. 8.^b

Exxvi.

Art 9th

A handwritten musical score for Art 9th, Exxvi. The score consists of eight staves of music, each with a different key signature and time signature. A large brace on the left side groups the first four staves, and another brace groups the last four staves. The music includes various note values (eighth, sixteenth, thirty-second), rests, and dynamic markings. Some notes are marked with asterisks (*). The paper is aged and yellowed.

Ex. xvi.

Grave

Allegro

Adagio

Art. 2.²

A handwritten musical score consisting of five systems of three staves each. The top staff uses a treble clef, the middle staff an alto clef, and the bottom staff a bass clef. The key signature varies between G major (two sharps) and C major (no sharps or flats). The time signature is common time (indicated by a 'C'). The music is labeled "Art. 2.²" above the first system and "Allegro" below it. The score features various note heads, stems, and bar lines, with some notes having small asterisks or crosses through them. The paper is aged and yellowed.

56.

Handwritten musical score for three staves, measures 56-59. The top staff uses a treble clef, the middle staff an alto clef, and the bottom staff a bass clef. Measures 56-57 feature sixteenth-note patterns. Measure 58 begins with a dotted half note followed by eighth-note pairs. Measure 59 concludes with a sixteenth-note pattern.

Handwritten musical score for three staves, measures 60-63. The top staff starts with a dotted half note followed by eighth-note pairs. Measures 61-62 show sixteenth-note patterns. Measure 63 ends with a sixteenth-note pattern.

Arpeg:

Handwritten musical score for three staves, measures 64-67. The top staff shows a series of chords with vertical stems. Measures 65-66 feature sixteenth-note arpeggios. Measure 67 ends with a sixteenth-note pattern.

Handwritten musical score for three staves, measures 68-71. The top staff has sustained notes with vertical stems. Measures 69-70 feature sixteenth-note patterns. Measure 71 ends with a sixteenth-note pattern.

Handwritten musical score for three voices. The top voice (G clef) has a sustained note followed by a dotted half note. The middle voice (C clef) has eighth-note pairs. The bottom voice (F clef) has quarter notes.

Handwritten musical score for three voices. The top voice has quarter notes. The middle voice has eighth-note pairs. The bottom voice has quarter notes.

Handwritten musical score for three voices. The top voice has sixteenth-note patterns. The middle voice has quarter notes. The bottom voice has eighth-note pairs.

Handwritten musical score for three voices. The top voice has sixteenth-note patterns. The middle voice has quarter notes. The bottom voice has eighth-note pairs.

58.

A handwritten musical score for three voices (Treble, Alto, Bass) on five staves. The music consists of six systems. The first system begins with a treble clef, a common time signature, and a key signature of one sharp. The second system begins with an alto clef and a common time signature. The third system begins with a bass clef and a common time signature. The fourth system begins with a treble clef and a common time signature. The fifth system begins with an alto clef and a common time signature. The sixth system begins with a bass clef and a common time signature. The score features various note heads, stems, and rests, with some notes having vertical lines extending above or below them. There are also several fermatas (dots over notes) and a single asterisk (*) placed above a note in the bass line of the first system. The paper is aged and yellowed.

Ex. XIX.

Art. 3.^dThe Natural
Sc^c Ascending

A handwritten musical score for three voices. The top staff is labeled 'The Natural Sc^c Ascending'. It consists of four staves, each with a different vocal range (1st, 2nd, 3rd, and Fund¹). The music is written in common time with a treble clef. The notes are represented by dots and dashes on the staves. The score includes vertical bar lines and repeat signs.

The Natural
Sc^c Descending

A handwritten musical score for three voices. The top staff is labeled 'The Natural Sc^c Descending'. It consists of four staves, each with a different vocal range (1st, 2nd, 3rd, and Fund¹). The music is written in common time with a treble clef. The notes are represented by dots and dashes on the staves. The score includes vertical bar lines and repeat signs.

The Fund¹ Har-
mony Descending

A handwritten musical score for three voices. The top staff is labeled 'The Fund¹ Harmony Descending'. It consists of four staves, each with a different vocal range (1st, 2nd, 3rd, and Fund¹). The music is written in common time with a treble clef. The notes are represented by dots and dashes on the staves. The score includes vertical bar lines and repeat signs.

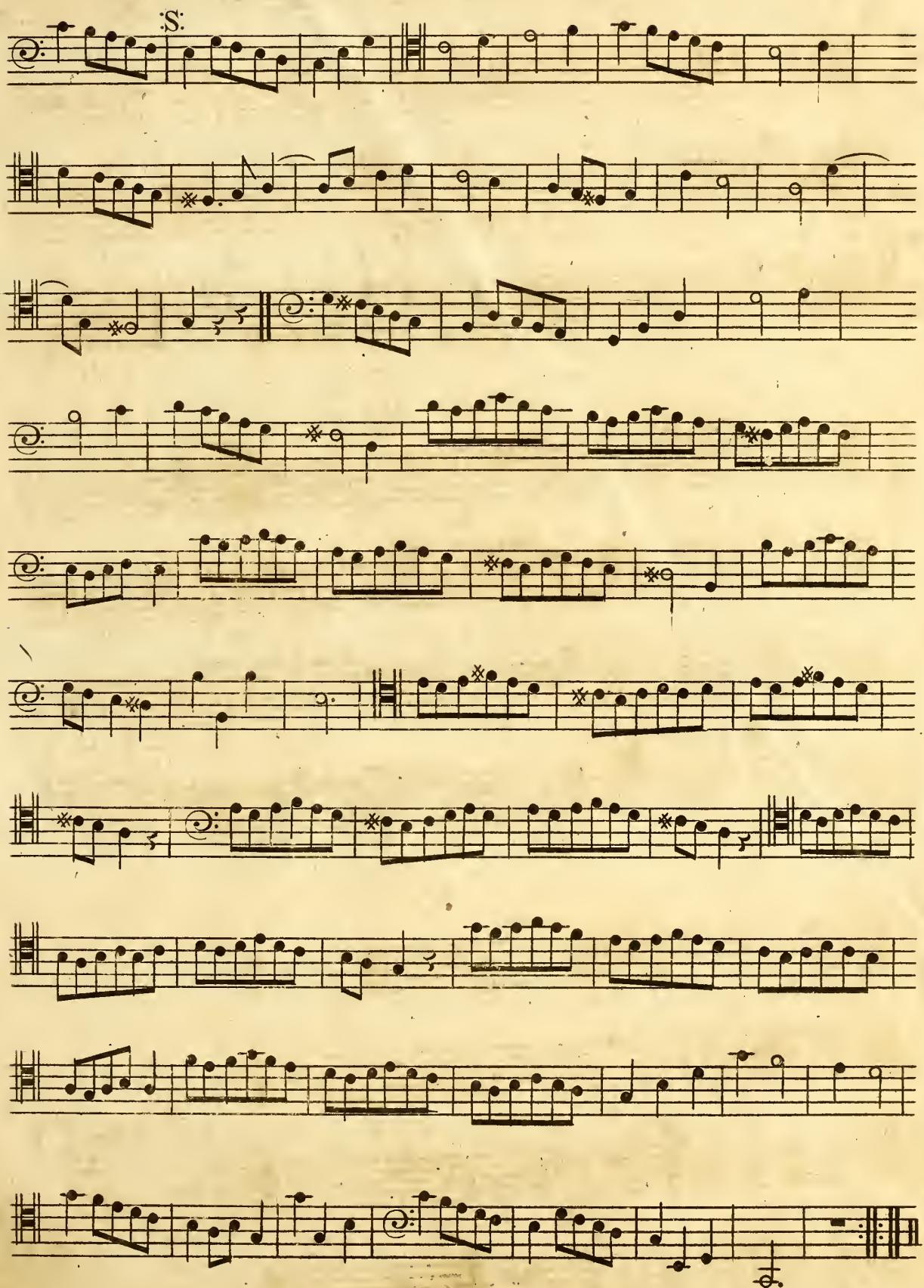
The two immo-
vable Basses

Ex. xx.

Art. 4[#]

The score is divided into sections by large brace-like brackets. The first section (measures 1-4) has a key signature of one sharp (G major). The second section (measures 5-8) has a key signature of zero sharps or flats. The third section (measures 9-12) has a key signature of one sharp (G major). The fourth section (measures 13-16) has a key signature of zero sharps or flats. The fifth section (measures 17-20) has a key signature of one sharp (G major). The sixth section (measures 21-24) has a key signature of zero sharps or flats. The seventh section (measures 25-28) has a key signature of one sharp (G major).

Ex. XXI.



CADENCES

Art. 5.th

Perfect

Imperfect

Ex. I



Flying Cadences

Ex. II



Broken Cadences

Ex. III



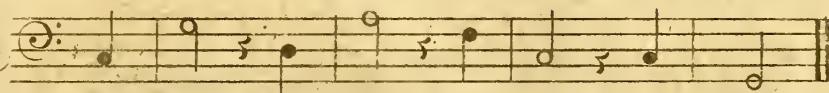
Ex. IV

Deceptive or false Cadences

Fund¹

Suspended Cadences

Ex. V



of the ACCENT

Art. 6.th1st2^d3^d

Not accented

Accented

Not

Acc.

Ex. VI

Ex. VI



Ex. X

Ex. XI



(FINE)

